



UNDERSTANDING MINNESOTA PUBLIC DRAINAGE LAW

A Handbook for Practitioners



HANDBOOK

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Minnesota Board of Water and Soil Resources

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Purposes of this Handbook

The precursor to this updated edition of **Understanding Minnesota Public Drainage Law** was first published by the Association of Minnesota Counties (AMC) in 1998 and subsequently updated in 2002 with the subtitle “2002 Overview for Decision-makers.” The purpose was to support more consistent knowledge and application of Minnesota public drainage law. That purpose continues and is expanded with this update to be “A Handbook for Practitioners” in two versions. The **Handbook** version is comprehensive for practitioners who seek detailed information about Minnesota public drainage law authorities, requirements, process, and associated information. The companion **Overview** version is for decision-makers and others seeking a summary of this information. The updated purposes include:

- 1) Enhance understanding and administration of current Minnesota public drainage law (drainage code) (Minnesota Statutes [Chapter 103E Drainage, 2019](#)).
- 2) Summarize and clarify roles and responsibilities of the primary players involved in public administration of Chapter 103E drainage systems.
- 3) Provide summary flow charts of process steps involved in different categories and types of Chapter 103E drainage proceedings and procedures, as well as more detailed explanations of the process steps and requirements for separate types of proceedings or procedures.
- 4) Provide electronic links to applicable Chapter 103E and other statute provisions by section (§) and to associated information in the [Minnesota Public Drainage Manual, 2016 \(MPDM\)](#), for more comprehensive reference.
- 5) Clarify understanding of provisions in Chapter 103E that enable multipurpose drainage water management and associated Best Management Practices (BMPs).

Disclaimer

The **Handbook** and **Overview** documents provide organized information and guidance about Chapter 103E. They do not supersede statute, rule or other law. Readers are cautioned to obtain legal advice when using specific drainage proceedings or procedures, including checking for any changes in drainage law and pertinent case law, as appropriate. When reading Chapter 103E, note that many provisions have not been fully updated to more clearly reflect watershed districts as drainage authorities.

Section 1. INTRODUCTION

A broad spectrum of individuals across Minnesota need to understand and apply various aspects of state drainage law. County commissioners, watershed district managers, county auditors, watershed district secretaries and administrators, county and private attorneys, drainage engineers, viewers, drainage managers, drainage inspectors, petitioners, other interested property owners, and state and federal agencies can all have roles in drainage proceedings and procedures.

Minnesota Statutes, [Chapter 103E Drainage](#) is substantially prescriptive and does not have associated rules. State courts have found that drainage authorities must follow drainage law carefully. Minnesota Statutes [Chapter 103D Watershed Districts](#) includes several provisions that connect to Chapter 103E, as explained in this Handbook.

The [Minnesota Public Drainage Manual \(MPDM\)](#) provides detailed guidance about Chapter 103E and is a linked reference for this Handbook. The MPDM was first published in 1991 and substantially updated

in 2016. The current version can also be accessed through the Board of Water and Soil Resources (BWSR) website at: [Technical Resources, Drainage in Minnesota, Minnesota Public Drainage Manual](#).

1.1 Background and History of Drainage Law in Minnesota

Minnesota is known for its abundant and important water resources, including more than 10,000 lakes, the headwaters of three major river basins (Mississippi River, Red River of the North, and the Great Lakes), world class fisheries, and a sizable portion of the prairie pothole region of the Midwest. Minnesotans value these water resources, as evidenced by the state's public waters and wetland conservation laws, various conservation programs, and comprehensive water planning and implementation at the local and state levels, in coordination with federal laws and programs.

Water has also created challenges from the early days of statehood. When Minnesota was settled in the 19th century, approximately ten million acres of wetlands ("swamp lands") covered about one-fifth of the future state's area. The first state drainage act was passed in 1858, the same year that Minnesota became a state ("An Act to Regulate and Encourage the Drainage of Lands"). That act recognized drainage corporations of multiple landowners. For a time, township boards of supervisors were drainage authorities for group drainage projects. Between 1883 and 1887, drainage statute significantly similar in scope to the current Chapter 103E **Drainage** was passed and amended making county boards drainage authorities. Over the years, drainage authorities have included a Red River Basin commission, the State of Minnesota, and district courts. Current Chapter 103E drainage authorities include:

- county board of commissioners;
- joint county board of representative commissioners from affected counties; and
- watershed district board of managers.

The primary purposes of drainage law have been to make land more productive for agriculture, build and protect roadway embankments, protect public health from stagnant waters and insect-carried disease, and promote commerce. These purposes were to be achieved through development of drainage projects across multiple private properties and governmental boundaries. Over the years, Minnesota drainage law has retained these purposes, while adding provisions for protection of public waters, wetlands, and broader considerations of environmental and natural resource protection, as state and federal laws were enacted for those purposes. There has also been a progression of comprehensive water management in Minnesota's water planning laws and some revisions in Chapter 103E to improve compatibility with comprehensive water planning and implementation.

Minnesota has approximately 19,150 miles of drainage ditches and extensive untallied miles of subsurface tile installed and maintained under Chapter 103E **Drainage**. The vast majority of Chapter 103E drainage systems were established in the late 1800s or early 1900s. These drainage systems continue to primarily serve agricultural production by receiving and conveying excess surface and subsurface runoff downstream. Many also serve transportation system drainage and some also serve municipal drainage needs.

Chapter 103E drainage systems are owned by the benefited property owners and administered by the applicable local government unit drainage authority, in accordance with Chapter 103E. These systems are referred to as "public" drainage systems. Chapter 103E drainage authorities act on behalf of the benefited property owners of the drainage system. Drainage authorities must follow the provisions of drainage law, which defines the responsibilities and procedures by which these systems are established, improved, maintained/repared, paid for, and otherwise administered.

Minnesota's various public drainage system designations reflect the different local and state units of government that have functioned as drainage authorities over the years, including township ditches, county ditches, joint county ditches, state ditches, judicial ditches and watershed district ditches. All of these can involve both open ditches and/or subsurface tile systems. Drainage system terminology also includes mains, laterals, branches, forks, and spurs of drainage systems.

Minnesota drainage law has been periodically revised over the years and recodified several times via the state legislative process. Since 2006, the stakeholder Drainage Work Group (DWG) has provided a forum for discussion of Chapter 103E drainage law and has been a key source of recommendations for revisions. The DWG is coordinated by the Minnesota Board of Water and Soil Resources (BWSR) in accordance with [§ 103B.101 Board of Water and Soil Resources, Subd. 13. Drainage stakeholder coordination.](#)

[MPDM Chapter 2. Administrative and Legal Issues](#) includes numerous footnote references to pertinent case law that help clarify interpretation, limits, and some potentially unsettled aspects of drainage law.

1.2 Key Characteristics of Chapter 103E

- Chapter 103E proceedings and procedures are primarily petition based by affected or interested property owners, individuals or entities. However, drainage authorities also make findings and order repairs and other types of drainage proceedings or procedures based on inspection of the drainage system and associated reports.
- All drainage system costs are paid by the owners of property determined to be benefited by the drainage project or drainage system in proportion to the benefits, **with two exceptions:**
 - 1) Since 2000, external sources of funding can be used in coordination with drainage system funds for the purposes of wetland preservation or restoration, creation of water quality improvements, or flood control.
 - 2) Since 2019, repair costs alternatively can be apportioned based on relative runoff and relative sediment delivery from all property contributing runoff to the drainage system.
- Some types of drainage proceedings and procedures require an engineer's report, some require a viewers' report and a property owners' report, and some an inspection report.
- Most types of drainage proceedings and procedures require a public hearing and drainage authority findings and order.
- Appeal rights involving the applicable district court are provided for certain types of drainage authority orders.
- Drainage authority advisors include county auditors, watershed district secretaries and administrators, county or watershed district drainage system managers, engineers, county or private attorneys, viewers, inspectors, and involved state and federal agencies.

1.3 Roles and Responsibilities in Drainage System Administration

A summary of entities involved in Chapter 103E drainage system administration and their roles and responsibilities are outlined in **Table 1-1. Summary of Drainage System Roles and Responsibilities.** This table may not include all possible situations.

Table 1-1. Summary of Drainage System Roles and Responsibilities

<p>Affected Property Owner(s) or other Eligible Individual or Entity</p> <ul style="list-style-type: none"> • Prepare and file a petition, and bond, if required, or seek legal assistance for this • Share in the costs of a petitioned drainage project proceeding and/or the drainage system, as required
<p>Drainage Authority</p> <ul style="list-style-type: none"> • Act as the drainage system’s governing body – administer proceedings and procedures; approve petitions; hold hearings; make findings; issue orders; appoint engineer(s), viewers, and inspector(s); engage or retain attorney(s); apportion costs; etc.
<p>County Auditor, Watershed District Secretary and Administrator, Drainage Manager</p> <ul style="list-style-type: none"> • Maintain drainage system records, including petitions, engineer’s reports, drainage system plans and profiles, viewers’ reports, property owners’ reports, records of proceedings and procedures, inspection reports, etc. • Maintain finances and financial records for each drainage system • Receive filed petitions, engineer’s reports, viewers’ reports, inspection reports, etc. • Provide petitions, reports, bond certificates, other documents to drainage authority • Schedule, provide notice and assist hearings and other pertinent communications • Recommend or assign drainage system alphanumeric identifications • Order the first meeting of viewers • Prepare and mail property owners’ report based on viewers’ report • Collect assessments and charges • Receive appeals of certain drainage authority orders for benefits, damages, project dismissal or establishment and transmit to the drainage authority • File notice of appeal of benefits and damages or orders with the applicable district court administrator
<p>County Attorney or Private Attorney (Engaged or retained by the drainage authority.)</p> <ul style="list-style-type: none"> • Review and prepare opinions about adequacy of petitions and approve associated bonds, as applicable, on behalf of the drainage authority • Advise the drainage authority about drainage law and associated provisions of law • Prepare construction contract and bond (with engineer and petitioners’ attorney, as applicable)
<p>Drainage Inspector (Appointed by the drainage authority. May be a county highway engineer, but not a county commissioner.)</p> <ul style="list-style-type: none"> • Inspect drainage systems as directed by the drainage authority • Coordinate with property owners and may work with an inspection committee • Prepare and file inspection reports • May assist enforcement of Chapter 103E drainage systems and buffer strips

<p>Engineer (Appointed by the drainage authority.)</p> <ul style="list-style-type: none"> • Required to file an oath and bond when appointed by a drainage authority • Complete preliminary and detailed surveys, prepare and file associated reports, plans and specifications, construction inspection and as-built documents • Conduct investigations, prepare and file petitioned repair reports • Maintain field notes and file with the county auditor or watershed district secretary
<p>Viewers (Appointed by the drainage authority. Panel of three “disinterested residents” of Minnesota qualified to determine benefits and damages.)</p> <ul style="list-style-type: none"> • Determine benefits and damages for properties affected by a drainage project or drainage system • Viewers team prepares viewers’ report and typically the lead viewer presents to the drainage authority at hearings, and at appeal trials, as applicable
<p>Department of Natural Resources</p> <ul style="list-style-type: none"> • Conduct advisory review and reports for Preliminary and Detailed Engineer’s Reports for “drainage projects”, including watershed district engineer’s reports and plans for “drainage projects” • Must be notified and can review repair plans that may affect public waters • Can contest and help to resolve repair depths that may affect public waters • Provide a Letter of Permission, if required for drainage work in public waters • Issue a Public Waters Work Permit, if required for a “drainage project” that substantially affects public waters
<p>Board of Water and Soil Resources</p> <ul style="list-style-type: none"> • Conduct advisory review and reports for watershed district engineer’s reports and plans for “drainage projects” • Coordinate and compile ditch buffer strip annual reporting • Coordinate and represent the stakeholder Drainage Work Group (DWG)
<p>Wetland Effects Reviewers (Can involve local, state and federal government staff regarding the MN Wetland Conservation Act, U.S. Clean Water Act, U.S. Rivers and Harbors Act, or USDA Farm Bill wetland conservation requirements, as applicable.)</p> <ul style="list-style-type: none"> • Determine compliance with applicable legal requirements and advise mitigation, if necessary

1.4 Categories and Types of Drainage Proceedings and Procedures

The terms “drainage project”, “project”, “drainage proceeding”, and “proceeding” can be confusing, because some of these terms are defined quite narrowly in Chapter 103E but are also used more broadly within and outside the statute. The term “procedure” is also used in Chapter 103E, including in the definition of a “proceeding.”

Repairs are often referred to as a “project” but are not a “drainage project” in Chapter 103E. Some other types of drainage proceedings can also be about a project that is not a “drainage project”, such as

impounding, rerouting and diverting drainage system waters. The context of use of these terms in Chapter 103E is key to understanding the applicable meaning.

The term “proceeding(s)” is also used more broadly than its statutory definition to refer to some drainage proceedings or procedures that may or may not require a petition or are not a “drainage project”. There are many procedures in Chapter 103E that are not a “proceeding.” This Handbook and Overview use “Drainage Proceedings and Procedures” as overarching terminology that includes the categories “**Drainage Projects**”; “**Repairs**”; and “**Other Proceedings or Procedures.**” The general definitions below, together with **Figure 1. Categories and Types of Drainage Proceedings and Procedures**, define and organize these categories and types of drainage proceedings and procedures. Detailed information about drainage proceedings, procedures and associated processes are provided in **Section 3. DRAINAGE PROJECTS**, **Section 4. DRAINAGE SYSTEM REPAIRS**, and **Section 5. OTHER PROCEEDINGS OR PROCEDURES** of this Handbook.

§ 103E.005 DEFINITIONS:

Subd. 11. **Drainage project.** “Drainage project” means a new drainage system, an improvement of a drainage system, an improvement of an outlet, or a lateral.

Subd. 22. **Proceeding.** “Proceeding” means a procedure under this chapter for or related to drainage that begins with filing a petition and ends by dismissal or establishment of a drainage project.

Drainage Projects

- **New Drainage System Projects:** Establishment of a new drainage system of open ditch or subsurface tile, or both, to drain property.
- **Improving Drainage Systems:** Enlarging, extending, straightening or deepening an existing drainage system to increase hydraulic capacity and drainage efficiency.
- **Improving Outlets:** A project to prevent overflow onto adjoining properties by extension of an existing drainage system downstream, and/or enlargement of an existing drainage system outlet.
- **Laterals:** Construction of a branch, or similar extension of an existing drainage system to better connect and drain land within the watershed of the drainage system.

Repairs

- **Repairs based on inspection** of the drainage system can include: clean out of sediment deposits, removal of undesirable vegetation or other obstructions, replacement of a failing hydraulic structure, permissive establishment of permanent strips of perennial vegetation (ditch buffer strips) or side inlet controls, and other erosion control that does not require acquisition of additional land rights by the drainage system. Drainage authorities can initiate this type of repair without a petition.
- **Petitioned repairs** can include the types of repairs listed above, as well as repairs that require the acquisition of additional land rights or create new benefits. These can include resloping of ditch side slopes, installation of a 2-stage ditch cross-section, removing trees, and installing other erosion control.

Other Proceedings or Procedures

These include many types of drainage proceedings or procedures shown in **Figure 1-1. Categories and Types of Drainage Proceedings and Procedures** below that may or may not require a petition but require a hearing. A few of the procedures can occur within the process of a “drainage project” proceeding or “petitioned repair” proceeding.

Figure 1-1. Categories and Types of Drainage Proceedings and Procedures



1.5 Other Key Terms and Their Meaning

Table 1-2. Other Key Terms Used in Chapter 103E help clarify the meaning of other key terms used in Chapter 103E that can be confusing. The context of use of these terms in Chapter 103E is key to understanding the applicable meaning.

Table 1-2. Other Key Terms Used in Chapter 103E

<p>“assess” “assessing” “assessed” “assessment” – These terms can mean the evaluation or determination of something (e.g., by the engineer, viewers, or drainage authority), or can refer to a levy against property for the cost of a “drainage project”, “repair”, or “other proceeding or procedure.”</p>
<p>“damages” – Damages are the costs of a drainage system paid to the affected property owner(s) by the drainage system for land rights acquisition, including permanent and/or temporary right-of-way, diminished land value, or damage to a conservation program practice caused by a “drainage project” or “repair.”</p>
<p>“view”, “viewing” – This is the determination of benefited properties, monetary benefits, and damages of a drainage system by a team of three “viewers”, who are disinterested residents of Minnesota qualified to perform this role. The legal terms “view”, “viewer” and “viewing” can be found in the 1851 Territorial Statutes and early State statutes of Minnesota, and in other law, indicating visual inspection and associated official determination. Examples in early Minnesota statutes include “fence viewers”, who were empowered to police the identification and maintenance of “partition fences” along property boundaries, and “viewing” of a site on the ground by government officials and/or jurors to help make a legal determination.</p>
<p>“bond” – There are several types of bonds required and/or authorized by Chapter 103E, but not always clearly named in the statute.</p> <ul style="list-style-type: none"> • Petitioners’ bond to provide surety for payment of the costs of a “drainage project” proceeding until the project is ordered by the drainage authority, or in case the petition and proceeding is dismissed. • Bid bond from a contractor submitting a construction bid, providing surety that the contractor will honor their bid and sign a contract, if selected. • Construction performance and payment bond is required of the contractor awarded a construction contract to provide surety for project completion if the contractor defaults on the contract, including payment of workers, suppliers and subcontractors. • Financing bonds for drainage projects, repairs or certain other proceedings or procedures can include the following types. <ul style="list-style-type: none"> ○ Drainage bond ○ Temporary drainage bond ○ Definitive drainage bond ○ Drainage funding bond

1.6 Drainage Authority

As indicated above, Chapter 103E drainage systems in Minnesota are administered under the jurisdiction of the applicable drainage authority:

- county board of commissioners,
- joint county drainage authority board of representative commissioners, or
- watershed district board of managers.

When a Chapter 103E drainage system is located within one county, the jurisdictional authority typically is the **county board of commissioners**. This is the most common situation in Minnesota. Most of Minnesota's 87 counties administer one or more (up to many hundreds) of Chapter 103E drainage systems. Several counties have no Chapter 103E drainage systems and several others have transferred all drainage authority to a watershed district, in accordance with [§ 103D.625 Drainage Systems in Watershed District](#), or to another water management authority, in accordance with [§ 103E.812 Transfer of all or Part of Drainage System](#). A county board is authorized to serve as the drainage authority for Chapter 103E drainage systems only within the boundaries of the county.

When a drainage system crosses over one or more county boundaries, the jurisdictional authority is a **joint county board of representative commissioners**, with the exception where the drainage system is within, and administered by, a watershed district. A joint county board drainage authority is comprised of five county commissioners, with at least one member from each county where property is affected by the drainage system and representation approximately proportional to the amount of watershed of the drainage system in each county.

Where there is an organized watershed district, the **watershed district board of managers** is the jurisdictional authority for new Chapter 103E drainage systems and improvement of existing drainage systems, in accordance with [§ 103D.625 Drainage Systems in Watershed District, Subd. 4. Construction or improvement](#). Laterals, repairs and other proceedings or procedures for drainage systems administered by a county board or joint county board remain with that drainage authority, unless it chooses to transfer all or part an existing Chapter 103E drainage system to a watershed district, in accordance with [§ 103D.625 Drainage Systems in Watershed District, Subdivision 1. Duty to assume drainage systems](#). Such a transfer gives the watershed district jurisdiction over laterals, repairs of the existing drainage system, all other associated drainage proceedings and procedures, and drainage system records.

1.7 Jurisdiction Over Chapter 103E Drainage Systems

As indicated above, Chapter 103E drainage systems are owned by the benefited property owners and publicly administered by the drainage authority. In a drainage proceeding, establishment of jurisdiction is essential. Unless the drainage authority has or acquires jurisdiction in accordance with Chapter 103E, the drainage authority has no power to enter the land, disturb the land, or levy assessments for drainage system work on the land. Jurisdiction involves a local government unit (the drainage authority) that has been given a specific authority and responsibility to act by Chapter 103E.

Drainage proceedings can involve elements of eminent domain (taking of private property rights for drainage system use), the power to apportion and assess costs, and police powers to enforce the requirements of Chapter 103E. The concept of jurisdiction in drainage proceedings involves jurisdiction *in rem*, meaning jurisdiction "over the thing." Drainage proceedings affect land, not individuals, so are not affected by transfer of property ownership between persons.

Once jurisdiction of a drainage authority over a drainage project is established, it does not last forever unless specifically authorized in Chapter 103E, such as for ongoing drainage system maintenance/repair. The drainage authority's jurisdiction over a drainage system proceeding is valid only to the extent of the work that was called for in a petition and/or the authority established by the applicable Chapter 103E provision(s). If work not called for in a petition or not within the ongoing jurisdiction for maintenance is proposed, jurisdiction must be procedurally established anew, starting with a new petition or need for a proceeding. (See [MPDM, Chapter 2. Administration and Legal Issues, Section II. General Petition Requirements, F. Duration of Jurisdiction.](#))

The drainage authority is responsible to administer drainage proceedings and procedures and to maintain the drainage system and its records, on behalf of the benefited property owners.

1.8 Drainage System Easements

The drainage authority acquires a perpetual right-of-way easement on the property over which a drainage system passes, on behalf of the drainage system. This easement provides access for construction, inspection, repair and associated Chapter 103E activities for the drainage system. Land rights compensation (damages) are paid by the drainage system to the applicable property owners for permanent right-of-way acquisition and typically for temporary crop damage associated with a drainage project or a repair. Additional information about drainage system easements is provided in the [MPDM, Chapter 2. Administration and Legal Issues, Section III. Types of Proceedings, 4. Nature and Extent of the Easement Acquired.](#)

1.9 Drainage System Records

If the drainage authority is a county, Chapter 103E drainage system records are a responsibility of the county auditor. For a joint county drainage authority, the drainage system records are a responsibility of the auditor of the county with the largest portion of the drainage system watershed within its county boundary. If the drainage authority is a watershed district, the secretary of the board of managers is responsible for drainage system records. [Section 103E.101 Drainage Proceedings and Construction Records., Subd. 5a. Transferring records](#) includes provision for an authenticated copy of records for use by a watershed district when part of a drainage system is transferred from a county or joint county drainage authority to a watershed district in accordance with § 103D.625, or until the watershed district has necessary records storage facilities.

1.10 Due Process in Drainage Law

Petitions

A petition is required for many types of drainage proceedings and some procedures, indicating a request to the drainage authority for a drainage proceeding or procedure.

Reports

Inspection Reports are required for repairs based on inspection of a drainage system. An Engineer's Report is required for "drainage projects", petitioned repairs and several other types of proceedings or procedures for which the drainage authority needs engineering investigation, design and/or associated recommendations. Viewers' Reports are typically required to present determined or redetermined benefits and damages of "drainage projects" and drainage systems, including the value of land rights to be acquired by the drainage authority on behalf of a drainage system. A Property Owners' Report is required to define benefits, damages and costs of a "drainage project" and some "other proceedings or

procedures” for which viewers are appointed. A Repair Cost Apportionment Report is required for use of the relative runoff and sediment delivery option for repair cost apportionment.

Notice and Public Hearings

All petitioned drainage projects and many other drainage proceedings and procedures have requirements for public hearing(s). This includes scheduling the hearing date, time and location, and providing notice of the hearing to petitioners, owners of property and political subdivisions likely to be affected, and/or persons interested in the project or proceeding. Permissive authority for holding a hearing is also provided for some drainage authority actions.

Compensation for Damages

Chapter 103E provides for payment to affected property owners for permanent and temporary right-of-way, and compensation to a property owner for certain other effects of a drainage system.

Appeals

Chapter 103E includes opportunity for appeal of certain types of drainage authority decisions and orders, within specified time periods. This involves appeal to the applicable district court, in accordance with [§ 103E.091 Appeals.](#), or [§ 103E.095 Appeal from Orders Dismissing or Establishing Drainage Systems.](#) See **Section 7. APPEALS** for more information.

Section 2. PLANNING AND GENERAL CONSIDERATIONS

All Chapter 103E drainage proceedings and procedures can benefit from an applicable level of advance planning and coordination to help ensure common understandings of process requirements, cost assessment, potential regulatory constraints, and other considerations. This is particularly pertinent for petitioned drainage projects for which the petitioners must finance the cost of the proceeding until a “drainage project” is ordered to be established, or if the proceeding is dismissed. Early coordination and planning can help to identify considerations and constraints, avoid costly missteps or delays in the process, and help to explore the potential for alternative measures and use of external sources of funding for multipurpose projects. [Section 103E.011 Drainage Authority Powers., Subd. 5. Using external sources of funding](#) enables drainage authorities to use external funding for the specific purposes of wetland preservation or restoration, creation of water quality improvements, or flood control. This can be done in coordination with the purpose of adequate drainage funded by the drainage system.

2.1 Informal Meetings

[Section 103E.043 Informal Meetings](#) states that “A drainage authority may hold informal meetings in addition to the meetings and hearings required in this chapter to inform persons affected by the drainage system about the drainage proceedings and provide a forum for informal discussions.” Informal meetings can be valuable prior to property owners filing a petition for a drainage project or repair and prior to a drainage authority defining an inspection schedule and repair priorities.

Informal meetings allow affected property owners to share problems or concerns and have discussions with the drainage authority and its advisors, identify any potential regulatory concerns, and explore opportunities. These meetings can involve an engineer, an attorney and representatives of other local, state and federal government units, such as the Soil and Water Conservation District (SWCD), USDA Natural Resources Conservation Service (NRCS), Wetland Conservation Act (WCA) Local Government Unit (LGU), Department of Natural Resources (DNR), and U.S Army Corps of Engineers (USACE), as

applicable. This enables alternative measures to be discussed and the potential for any regulatory jurisdiction to be identified up front. Property owners can also involve their attorney.

2.2 Petition and Bond – General Requirements

Petition

All “drainage projects”, “petitioned repairs” and many “other proceedings or procedures” begin by eligible property owner(s) or another eligible affected or interested party filing a petition with the applicable drainage authority representative. A petition is often prepared by an attorney for eligible petitioner(s) and circulated by the petitioners for signature. Eligible petitioners, other petition requirements and where to file the petition are defined in this Handbook for specific proceedings and procedures in the applicable section for “drainage projects”, “drainage system repairs”, and “other proceedings or procedures”.

In accordance with [§ 103E.202 Petition, Subd. 2. Signatures on petition.](#):

(a) A petition must be signed by a requisite number of owners of 40-acre tracts or government lots and property that the drainage project described in the petition passes over, or by the property owners of the required percentage of the property area determined by the total and percentage of area of 40-acre tracts or government lots that the proposed drainage project passes over, excluding areas in and holders of easements for utilities and roads. A petition may be signed by the commissioner of transportation or by a political subdivision if the property is in the jurisdiction of the commissioner or political subdivision and is passed over by the proposed drainage project.

(b) Each separate parcel of property counts as one signature, but the petition must be signed by all owners of the parcel to count as a signature. The signature of each entity regardless of the number of parcels of property owned counts as one signature on the petition.

(c) Paragraph (a) does not apply to a petition for an improvement of an outlet.

After a petition for a “drainage project” or “repair” has been filed, a petitioner may not withdraw from the petition except with the written consent of all other petitioners on the filed petition ([§ 103E.202 Petitions, Subd 3. Withdrawal of a petitioner.](#)). The original “drainage project” petitioners can also petition to dismiss or delay a “drainage project” proceeding in accordance with [§ 103E.231 Dismissing or Delaying Proceedings; Petitioners.](#) (See **Section 5. OTHER PROCEEDINGS OR PROCEDURES**)

Petitioners’ Bond Requirements

A petitioners’ bond to provide surety to pay the costs of the applicable proceedings is required to be filed with a petition for the following types of proceedings and procedures:

- “drainage projects” ([§ 103E.202 Petitions, Subdivision 1. Applicability.](#)), except when a petition is filed by an affected county or watershed district for an improvement of an outlet of an existing drainage system ([§ 103E.221 Improving Outlets, Subd. 2. Petition. \(b\)](#));
- “petitioned repairs” ([§ 103E.202 Petitions, Subdivision 1. Applicability.](#)); and
- one type of “other proceedings or procedures” ([§ 103E.227 Impounding, Rerouting, and Diverting Drainage System Waters.](#)), unless petitioned by a government entity specified in [§ 103E.227, Subd. 2. Bond, paragraph \(b\)](#).

The petitioners’ bond must be from one or more petitioners for at least \$10,000 payable to the applicable drainage authority (and, if a joint county drainage authority, to its member counties). It must be conditioned to pay the costs incurred if the project is dismissed or a contract is not awarded to construct the project. ([§ 103E.202 Petitions, Subd. 5. Petitioners' bond.](#)) Proceeding expenses are not

to exceed the petitioners' bond. When a petitioners' bond is expected to, or does run out, an additional bond must be filed within the time prescribed by the drainage authority, for the proceeding to continue. ([§ 103E.202 Petitions., Subd. 6. Expenses not to exceed bond.](#)) See [MPDM Chapter 2. Administration and Legal Issues, Section II. General Petition Requirements](#) for additional information about petitions.

Joint and Several Liability of Petitioners

The act of signing a petition for a “drainage project” under Chapter 103E should not be taken lightly. Each petitioner who signs the petition must agree to be liable for all the costs incurred if the project is not established or the proceeding is dismissed. Petitions can fail for various reasons at significant expense to petitioners for costs of the proceedings. Costs can include engineering fees, attorney's fees, county auditor's costs and other drainage authority costs. If the project is established, those costs are apportioned and paid as part of the cost of the project. All benefited property owners then help pay for the costs, as apportioned. If, however, the petition is dismissed, or a contract is not let, the petitioners are responsible to pay the costs of the proceedings on an equally divided basis, or individually, as necessary. Petitioner(s) serving as a “principal” on a petitioners' bond have added risk. More information about petitioner liability and possible complications can be found in [MPDM Chapter 2. Administration and Legal Issues, Section II. General Petition Requirements, E. Petitioner Liability.](#)

2.3 Considerations Before Drainage Work is Done

There are three subdivisions in [§ 103E.015 Considerations Before Drainage Work is Done](#) that involve required considerations by the drainage authority, as applicable.

- Subdivision 1. **Environmental, land use, and multipurpose water management criteria.** This subdivision only applies to “drainage projects” and includes nine criteria that must be considered by the drainage authority and should be addressed in the engineer’s preliminary and final reports. These considerations are explained in detail in **Section 3. DRAINAGE PROJECTS**. Revisions of this subdivision adopted in 2014 were recommended by the stakeholder Drainage Work Group (DWG) to help clarify the nine criteria and increase Chapter 103E compatibility with comprehensive local water planning and implementation, including [One Watershed, One Plan](#).
- Subd. 1a. **Investigating potential use of external sources of funding and technical assistance.** This applies to “drainage projects” and “petitioned repairs”, all of which require an engineer’s report that can evaluate alternative measures and investigate external sources of funding. The DWG recommended addition of this subdivision in 2014 to promote coordination of public program and drainage system assessment funding for multipurpose drainage projects and repairs. The investigation must include early coordination with soil and water conservation district, county, and watershed district water planning authorities and should consider eligibility, availability, and timing of external funding.
- Subd. 2. **Determining public utility, benefit and welfare.** This oldest and broadest provision in § 103E.015 applies to all work affecting a Chapter 103E drainage system. Its focus is on consideration of conservation of natural resources and other public interests and matters of law when a drainage authority makes findings regarding public utility, benefit, and welfare of drainage system work. This subdivision, as well as Subdivision 1, include consideration of applicable state and federal public waters and wetland conservation laws and possible cost considerations to avoid impacts and/or mitigate impacts. This can affect how to construct or repair a drainage system in the best interests of the affected property owners.

See [MPDM Chapter 2. Administration and Legal Issues, Section I. Administration and legal considerations before initiating a project or repair](#) for additional information.

2.4 Local Water Management Plan Considerations

Comprehensive local water plans in Minnesota address multipurpose water management. For “drainage projects”, [§ 103E.015, Subdivision 1. Environmental, land use, and multipurpose water management criteria., clause \(2\)](#) requires the drainage authority to consider “alternative measures, including measures identified in applicable state-approved and locally adopted water management plans, to:

- (i) conserve, allocate, and use drainage waters for agriculture, stream flow augmentation, or other beneficial uses;
- (ii) reduce downstream peak flows and flooding;
- (iii) provide adequate drainage system capacity;
- (iv) reduce erosion and sedimentation; and
- (v) protect or improve water quality.”
(i.e., five purposes)

Local water management plans include [County Water Plans](#), [Watershed District Management Plans](#), [Metro Watershed Management Plans](#), [Metro County Groundwater Plans](#) and [One Watershed, One Plans](#).

2.5 Best Management Practices

Many best management practices (BMPs) are standard procedure for drainage system design and maintenance. Early coordination is very important for consideration of alternative measures and multipurpose BMPs, including the potential to integrate use of external sources of funding for eligible purposes in addition to the purpose of adequate drainage. Informal meetings can be very helpful to coordinate with property owners, local water planners, and representatives of conservation programs that might provide external funding (typically cost-share) for eligible BMPs. Additional information is provided in **Section 8. BEST MANAGEMENT PRACTICES**, including a list of provisions of Chapter 103E that enable multipurpose considerations and BMPs for “drainage projects” and “repairs”, as well as [§ 103E.227 Impounding, Rerouting, and Diverting Drainage System Waters](#) (an “other proceeding or procedure”).

2.6 Drainage System Cost Apportionment

Each drainage system is an entity unto itself. All costs of the drainage system are paid by the owners of property determined to benefit from the drainage system, project or proceeding, with a few variations and one alternative option for repairs only. It is advisable for affected property owners to understand the applicable method for apportioning costs of a “drainage project”, “repair”, or “other proceeding or procedure” before signing an associated petition.

Drainage projects require determination of benefits and damages by a team of three viewers. Project costs are apportioned pro rata to benefited property owners based on the benefits determined, minus any damages paid to them for property rights acquired by the drainage system.

- Costs for **establishment of a new drainage system** are apportioned to all properties benefited by the drainage system.

- Costs for **improvement, improvement of an outlet, or a new lateral** to an existing drainage system are apportioned only to those properties directly benefited by the “drainage project”.

Repair costs anywhere on a drainage system are paid on a pro rata basis by the owners of all property benefited by or contributing runoff to the drainage system, in accordance with [§ 103E.728 Apportioning Repair Costs](#) or [§ 103E.729 Apportioning Repair Costs; Alternative Option](#). The § 103E.728 method is based on the benefits of record determined by viewers and adopted by the drainage authority for a prior “drainage project”, or as redetermined for the drainage system in accordance with [§ 103E.351 Redetermining Benefits and Damages](#). The alternative § 103E.729 method is based on relative runoff and relative sediment delivery from all properties contributing runoff to the drainage system. This alternative repair cost apportionment method was added to Chapter 103E in 2019, based on recommendations of the stakeholder Drainage Work Group. This method only applies to repairs and can be a way to more equitably apportion and assess repair costs when the benefits of record are out of date. Runoff and sediment contributions to a drainage system are key factors affecting the need for and type of repair. These factors can be weighted in this method to better correlate with the type of repair. This option was adopted with a 5-year trial period until July 31, 2024, which can be changed by legislative process.

Improvement projects can involve separable repairs, in accordance with [§ 103E.215 Improving Drainage Systems., Subd. 6. Petition for separable part of drainage system needing repair](#). Deferred repair costs are separated from improvement costs by the engineer and apportioned pro rata by the drainage authority to benefited properties of the entire drainage system. Improvement costs are apportioned pro rata to the properties benefited by the improvement. Benefits determined for an improvement of part of a drainage system are at a different point in time than the prior drainage system benefits of record. Use of [§ 103E.351 Redetermining Benefits and Damages.](#), can update all benefits to the same point in time for more equitable repair cost apportionment. Alternatively, the drainage authority can use the § 103E.729 option for repair cost apportionment.

A variation of cost apportionment is when external sources of funding are used in accordance with [§ 103E.011 Drainage Authority Powers., Subd. 5. Using external sources of funding](#) and/or [§ 103E.227 Impounding, Rerouting, and Diverting Drainage System Waters](#). The use of external funds is limited to costs for purposes of wetland preservation or restoration, creation of water quality improvements, or flood control, in accordance with § 103E.011, Subd. 5. Costs eligible for external funding purposes from government programs or other sources should be kept separate from drainage system costs for the drainage purpose and paid accordingly.

2.7 Drainage System Accounts, Repair Fund, Liens and Financing Bonds

Project Accounts and Repair Fund

Each drainage system is a separate entity. Drainage authorities maintain separate drainage system accounts and a separate repair fund for each drainage system, in accordance with [§ 103E.651 Drainage System Account](#) and [§ 103E.735 Drainage Systems; Repair Fund](#). A project account is often used for a specific drainage project or repair to track costs, assessments and payments. A repair fund for each drainage system typically involves periodic assessments of the appropriate properties. Repair fund accounts have an upper monetary limit of 20% of the total benefits of record for the drainage system or \$100,000, whichever is greater. Drainage systems can borrow from the accounts of other drainage systems, with interest at the same rate per year charged on drainage liens and assessments, in accordance with [§ 103E.655 Paying Drainage System Costs., Subd. 2. Insufficient funds; transfer from other accounts](#) and [§ 103E.611 Paying Drainage Liens and Interest., Subd. 2. Interest](#). The accounting

for each drainage system is a responsibility of the applicable county auditor or watershed district secretary, on behalf of the drainage authority and the drainage system. See [MPDM, Chapter 2. Administration and Legal Issues, Section VIII. Funding, Collection, and Payment of Drainage System Costs, C. Accounting](#) for additional information.

Drainage Liens

Apportioned assessments for drainage system costs and the associated interest allowed are a drainage lien against the applicable property. A drainage lien is a first and paramount lien until fully paid, with priority over mortgages and other liens, unless the drainage authority subordinates the drainage lien to liens of record. ([§ 103E.605 Effect of Filed Drainage Lien.](#)) A drainage lien statement is required for “drainage projects” to tabulate cost apportionment, damages and net liability for each applicable tract of property.

For “drainage projects”, the interest rate on the drainage lien principal from the date the drainage lien statement is recorded, must be set by the drainage authority but may not exceed the rate determined by the state court administrator for judgments under [§ 549.09 Interest on Verdicts, Awards, and Judgments.](#), or six percent, whichever is greater. ([§ 103E.611 Paying Drainage Liens and Interest., Subd. 2. Interest.](#)) The enforcement, collection, penalty, and interest provisions relating to real estate taxes apply to the payment of drainage liens. ([§ 103E.611 Subd. 7. Collecting and enforcing drainage liens.](#))

For the cost of a “repair” paid in installments, the interest rate may not exceed seven percent per year and must be collected with each installment. The number of installments can be up to 15 depending on repair costs in relation to the drainage system benefits of record. ([§ 103E.731 Assessments; Bonds.](#))

Applicable sections of Chapter 103E include:

- [§ 103E.601 Drainage Lien Statement.](#)
- [§ 103E.605 Effect of Filed Drainage Lien.](#)
- [§ 103E.611 Paying Drainage Liens and Interest.](#)
- [§ 103E.615 Enforcing Assessments.](#)
- [§ 103E.621 Satisfying Liens.](#)
- [§ 103E.625 Subdivision by Platting; Liens Apportioned.](#)
- [§ 103E.631 Apportioning Liens.](#)
- [§ 103E.731 Assessments; Bonds.](#)

See [MPDM, Chapter 2. Administration and Legal Issues, Section VIII. Funding, Collection, and Payment of Drainage System Costs, A. Drainage Liens](#) for additional information. A watershed district drainage authority has the power to levy drainage system assessments but must coordinate with the applicable county(ies) to administer and collect the assessments.

Drainage Financing Bonds

A drainage authority may authorize the issuing of bond(s) to finance the cost of a “drainage project” or “repair” of a drainage system, if the drainage system accounts have insufficient funds and the drainage authority orders the assessments to be paid in installments. As noted in **Table 1-2. Other Key Terms Used in Chapter 103E**, there are several types of drainage financing bonds, including drainage bonds, temporary drainage bonds, definitive drainage bonds, and drainage funding bonds. The following sections of Chapter 103E address the use of bond issues and bonds for drainage system financing.

- [§ 103E.635 Drainage Bond Issues.](#)
- [§ 103E.641 Drainage Funding Bonds.](#)
- [§ 103E.731 Assessment; Bonds.](#)

More information about drainage system costs, funding, and accounting requirements can be found in the [MPDM, Chapter 2. Administration and Legal Issues, Section VIII. Funding, Collection, and Payment of Drainage System Costs.](#)

Section 3. DRAINAGE PROJECTS

Drainage projects, as defined in Chapter 103E, include establishment of a new drainage system, improvement of an existing drainage system, improvement of an outlet of an existing drainage system, and establishment of a lateral to an existing drainage system. The process for drainage project petition, investigation, design, preliminary hearing, potential dismissal, viewing, final hearing and order, construction, acceptance and cost assessment can require significant time.

3.1 Drainage Project Petition and Bond

“Drainage projects” must be initiated by petition. General petition and bond requirements that apply are outlined in **Section 2. PLANNING AND GENERAL CONSIDERATIONS, Petition and Bond – General Requirements**. A certain percentage of property owners must sign the petition, except that the board of an affected county or watershed district can petition for an improvement of an outlet of an existing drainage system, as indicated in **Table 3-1. Other Requirements for “Drainage Project” Petitions**.

All “drainage project” petitions must:

- state that the project:
 - “will benefit and be useful to the public and will promote the public health” ([§ 103E.212](#)), or
 - “will be of public benefit and promote the public health” ([§ 103E.215](#)), or
 - “will be of public benefit and utility and improve the public health” ([§ 103E.221](#)), or
 - “will be of public benefit and utility and promote the public health” ([§ 103E.225](#)).
- state that petitioners will pay all costs incurred if the project proceedings are dismissed or a contract for construction is not awarded, and
- be accompanied by a petitioners’ bond of at least \$10,000, as described in **Section 2. PLANNING AND GENERAL CONSIDERATIONS, Petition and Bond – General Requirements**, except that a petition by an affected county or watershed district for an improvement of an outlet of an existing drainage system does not require a petitioners’ bond.

Who can file a petition and other petition requirements specific to each type of “drainage project” are outlined in **Table 3-1. Other Requirements for “Drainage Project” Petitions**.

Table 3-1. Other Requirements for “Drainage Project” Petitions

Drainage Project Type	Who Can File a Petition	Additional Required Contents of the Petition
Establishment of a New Drainage System § 103E.212	<ul style="list-style-type: none"> • Majority of owners of property that the proposed drainage system passes over. <li style="text-align: center;">or • Property owners owning at least 60% of the area the proposed system passes over. 	<ul style="list-style-type: none"> • Describe the 40-acre tracts or government lots and property the proposed system passes over, including names and addresses of property owners. • Describe the starting point, course and terminus of the system. • State why the drainage system is necessary.
Improvement of an Existing Drainage System § 103E.215	<ul style="list-style-type: none"> • At least 26% of owners of property affected by the proposed improvement. <li style="text-align: center;">or • At least 26% of the owners of property that the proposed improvement passes over. <li style="text-align: center;">or • Owners of at least 26% of the property area affected by the proposed improvement. <li style="text-align: center;">or • Owners of at least 26% of the property area that the proposed improvement passes over. 	<ul style="list-style-type: none"> • Designate the drainage system to be improved by number or description. • State that the drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet. • Describe the starting point, general course, and terminus of any extension. • Describe the improvement, including names and addresses of the owners of all property the improvement passes over.
Improvement of an Outlet of an Existing Drainage System § 103E.221	<ul style="list-style-type: none"> • By the Board of an affected county or watershed district. <li style="text-align: center;">or • By at least 26% of owners of adjoining overflowed property. <li style="text-align: center;">or • By owners of at least 26% of area of the overflowed property. 	<ul style="list-style-type: none"> • Describe the property that has been or is likely to be overflowed, including names and addresses of landowners, and the location and outlet of the overflowed drainage system. • Identify the drainage system(s) that have caused or are likely to cause the overflow. • Show the need for outlet improvement by enlarging the system or controlling waters by off-take ditches, additional outlets, etc. • Show outlet improvement will protect adjoining property from overflow.

Drainage Project Type	Who Can File a Petition	Additional Required Contents of the Petition
Establishment of a Lateral § 103E.225	<ul style="list-style-type: none"> • At least 26% of the owners of property that the proposed lateral passes over. or • By the owners of at least 26% of the area of the property that the proposed lateral passes over. 	<ul style="list-style-type: none"> • Describe the starting point, general course, and end point of the proposed lateral. • Describe the property to be crossed by the lateral, including names and addresses of the property owners. • State why the lateral is necessary. • Request that the lateral be constructed and connected with the drainage system.

[MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings](#) includes the following “drainage project” petition templates:

- [Template A](#) – Petition for Establishment of a New Drainage System.
- [Template B](#) – Petition for Improvement of an Existing Drainage System.
- [Template C](#) – Petition for Improvement of the Outlet of an Existing Drainage System.
- [Template D](#) – Petition for Establishment of a Lateral to an Existing Drainage System.

Figure 3-1(a. & b.) Process Summary for “Drainage Projects” in Appendix 1. Drainage Proceedings and Procedures Process Charts outline the sequence of steps for “drainage project” proceedings from petition through completion, including the applicable sections of Chapter 103E.

Following are descriptions of the chronological steps and requirements in the process for “drainage project” proceedings after a petition has been properly filed with the applicable county auditor or watershed district secretary of the drainage authority.

3.2 Transmittal of Petition and Bond

If the drainage authority is a county or watershed district board, the applicable county auditor or watershed district secretary with whom the petition and bond, if required, is filed must present the petition to the board at its next meeting. If the drainage authority is a joint county board, the applicable county auditor with whom the petition is filed must present the petition to the joint county board within 10 days after receiving the petition. The petition and bond are concurrently transmitted to the drainage authority’s attorney for review.

3.3 Legal Review of the Petition and Bond

After the petition and bond are filed, the drainage authority’s attorney reviews the petition and bond to determine if they meet all applicable requirements. The attorney must complete the initial review within 30 days after the petition and bond is filed and, if adequate, refer them to the drainage authority, or, if inadequate, refer them back to the petitioners for correction. ([§ 103E.238 County Attorney Review of Petition and Bond.](#)) Section 103E.071 **County Attorney** allows county attorney assistance by a private attorney per [§ 388.09 Other Attorney Employed, Subdivision 1. General provisions.](#)

3.4 Appointment, Oath, Bond and Compensation of Engineer

If the petition and bond meet legal requirements, the drainage authority must, within 30 days after referral from its attorney, appoint a professional engineer licensed in Minnesota to conduct a Preliminary Survey and prepare a Preliminary Survey Report. ([§ 103E.241 Engineer, Subdivision 1. Appointment.](#))

The engineer must subscribe to an oath to faithfully perform the assigned duties in the best manner possible and file a minimum \$5,000 bond with the county auditor or watershed district secretary, as applicable. The bond must have adequate surety, be payable to the county, joint counties, or watershed district where the drainage project is located, and be conditioned to pay any person or the drainage authority for damages and injuries resulting from negligence of the engineer while performing the engineer's duties. The aggregate liability of the surety for all damages may not exceed the amount of the bond. The bond is subject to approval by the applicable county auditor or watershed district secretary. ([§ 103E.241 Engineer, Subd. 2. Oath; bond.](#)) Because of the current costs of drainage projects, it's not uncommon for the drainage authority to require a minimum bond of \$100,000.

Compensation of the engineer, the engineer's assistants, and other employees providing help necessary to complete the engineer's duties is on a per diem basis and must be set by order of the drainage authority. The order must provide for payment of the actual and necessary expenses, including the cost of the engineer's bond. ([§ 103E.645 Allowance and Payment of Fees and Expenses, Subd. 2. Engineer, engineer's assistants, and other employees.](#); [§ 103E.241 Engineer, Subd. 3. Assistants; compensation, Subd. 4. Engineer's reports.](#)) The engineer must file an expense report every two weeks with the applicable county auditor or watershed district secretary, as soon as possible, including:

1. the names of the engineer, engineer assistants, and other employees who worked on the project under the engineer's direction and the time each was employed,
2. costs incurred by the engineer and others relating to the proceeding, and
3. every other item of expense incurred by the engineer.

Because the cost of the proceeding cannot exceed the petitioners' bond, the bi-monthly expense report helps ensure that this does not occur and alerts the drainage authority to request an additional bond from the petitioners, if necessary. See [MPDM, Chapter 2. Administrative and Legal Issues, Section IV. Preliminary Hearing, C. Appointment of the Engineer](#) for additional information and example templates for applicable drainage authority orders.

3.5 Preliminary Survey and Preliminary Survey Report

Following is an outline of required Preliminary Survey work and Preliminary Survey Report content, in accordance with [§ 103E.245 Preliminary Survey and Preliminary Survey Report](#) and other applicable provisions of Chapter 103E, and some associated recommendations.

- 1) The appointed engineer must proceed promptly to review the petition and order, conduct a preliminary survey of the petitioned drainage project area generally described in the petition and extended, if necessary, to secure an outlet. The engineer must examine:
 - a) the necessity and feasibility of the project;
 - b) whether the project substantially affects areas that are public waters; and
 - c) if the drainage project requires construction of an open channel, the nature and capacity of the outlet and any necessary extension.

- 2) The engineer may request, and the drainage authority may order, additional areas to be surveyed after giving notice by mail of a hearing to be held at least 10 days after the notice is mailed to the petitioners and persons liable on the petitioners' bond, holding the hearing, and obtaining consent of the persons liable on the petitioners' bond.
- 3) The engineer may accept and utilize survey information, plans, and other materials for a drainage or flood control project of the United States located within the proposed drainage project area in the preparation of the preliminary survey report.
- 4) If the engineer finds that the proposed drainage project appears to be feasible and to comply with [§ 103E.015, Subdivision 1. Environmental, land use and multipurpose water management criteria](#) (see below), the engineer must prepare a Preliminary Survey Report (aka Preliminary Engineer's Report), including a preliminary project plan and profile. The report should address the following components, in accordance with § 103E.245 and associated Chapter 103E requirements:
 - a) the type of drainage project and associated authorizing section(s) of Chapter 103E;
 - b) a preliminary plan defining the project drainage area, the size and character of the ditches and/or tile and other improvements necessary to make the plan practicable and feasible, including the property likely to be affected and known owners, which can include utilities, public roads, railways and public lands;
 - c) the elevation of the outlet and controlling elevations of the property likely to be affected referenced to standard sea level datum;
 - d) the character of the outlet and whether it is sufficient;
 - e) the probable cost of the drainage project;
 - f) consideration of the public utility, benefit or welfare of the project per [§ 103E.015, Subd. 2. Determining public utility, benefit, or welfare.](#) (see discussion below);
 - g) consideration of the specific environmental, land use and multipurpose water management criteria in [§ 103E.015, Subdivision 1.](#) (see criteria below);
 - h) investigation of potential external sources of funding for eligible purposes to help support multipurpose project measures per [§ 103E.015, Subd. 1a. Investigating potential use of external sources of funding and technical assistance.](#) (see discussion below);
 - i) whether the project affects public waters, and any applicable DNR permission or permit requirement information (see DNR guidance document ["Public Waters Authority over Work Done in Public Drainage Systems", February 28, 2018](#));
 - j) all other information necessary to define the practicability, necessity and feasibility of the project; and
 - k) other information as ordered by the drainage authority.

Although Chapter 103E does not require a soil survey for preliminary design, the USDA has nearly statewide coverage of soil surveys in Minnesota available via the [Web Soil Survey](#). That soils data, together with experience of ditch side slope stability and construction in the project area typically provide adequate soils information for preliminary design of open ditches and/or subsurface tile.

The following subsection of this Handbook and **Section 2. PLANNING AND GENERAL CONSIDERATIONS, Considerations Before Drainage Work is Done** provide information and guidance regarding § 103E.015, Subdivision 1., Subd. 1a. and Subd. 2. considerations. [MPDM, Chapter 3. Engineering and Environmental Considerations, Section III. Preliminary survey and engineer's preliminary report](#), as

well as [Section II. Specific environmental considerations](#), include additional information and guidance about the Engineer’s Preliminary Survey and Preliminary Survey Report.

It’s important that the Engineer’s Preliminary Survey Report provides the information and analyses necessary for the drainage authority to effectively consider the applicable Chapter 103E provisions and other applicable law in a timely manner within the “drainage project” process. The engineer is responsible to select the appropriate level of detail for the preliminary survey stage to provide reasonable estimates of proposed project features and costs, reasonably satisfy the needs of reviewing entities, and reasonably minimize preliminary survey costs of a project that might not be feasible. This can be a challenge requiring coordination with the drainage authority and petitioners that can prompt the drainage authority to hold associated [§ 103E.043 Informal Meetings](#) during preparation of the Preliminary Survey Report.

3.6 Considerations Before Drainage Work is Done

[Section 103E.015 Considerations Before Drainage Work is Done, Subdivision 1. Environmental, land use and multipurpose water management criteria](#) requires the drainage authority to consider 9 specific criteria for “drainage projects”. These criteria are listed in the text box below and discussed in **Table 3-2. Environmental, Land Use and Multipurpose Water Management Criteria**. The stakeholder Drainage Work Group recommended updates of § 103E.015 that were adopted in 2014 to make Chapter 103E more compatible with the multipurpose water management objectives of local water planning and implementation, including [One Watershed, One Plan](#).

§ 103E.015, Subd. 1. **Environmental, land use, and multipurpose water management criteria.**

Before establishing a drainage project, the drainage authority must consider the following criteria:

- (1) private and public benefits and costs of the proposed drainage project;
- (2) alternative measures, including measures identified in applicable state-approved and locally adopted water management plans, to:
 - (i) conserve, allocate, and use drainage waters for agriculture, stream flow augmentation, or other beneficial uses;
 - (ii) reduce downstream peak flows and flooding;
 - (iii) provide adequate drainage system capacity;
 - (iv) reduce erosion and sedimentation; and
 - (v) protect or improve water quality;
- (3) the present and anticipated land use within the drainage project or system, including compatibility of the project with local land use plans;
- (4) current and potential flooding characteristics of property in the drainage project or system and downstream for 5-, 10-, 25-, and 50-year flood events, including adequacy of the outlet for the drainage project;
- (5) the effects of the proposed drainage project on wetlands;
- (6) the effects of the proposed drainage project on water quality;
- (7) the effects of the proposed drainage project on fish and wildlife resources;
- (8) the effects of the proposed project on shallow groundwater availability, distribution, and use; and
- (9) the overall environmental impact of all the above criteria.

[Section 103E.015, Subd. 1a. Investigating potential use of external sources of funding and technical assistance](#) requires the drainage authority to investigate external sources of funding and technical assistance to help consider alternative measures identified in the project design and in applicable state-approved and locally adopted water management plans. The intent is to promote public program funding partnerships with drainage system funds for eligible purposes and multipurpose water management.

[Section 103E.015, Subd. 2. Determining public utility, benefit, or welfare](#) requires the drainage authority to give proper consideration to conservation of natural resources, other public interests, and other applicable state and federal laws, when making the required determination that the drainage project will be of public utility, benefit, or welfare.

Preparation of the Engineer’s Preliminary Survey Report and preliminary project plans is a key opportunity for early coordination about alternative measures, BMPs, and possible funding partnerships for multipurpose drainage management. It is recommended that the report specifically address each of the criteria and other considerations in § 103E.015 to provide the drainage authority thorough analyses and an associated basis for decision making.

Table 3-2. Environmental, Land Use and Multipurpose Water Management Criteria

Criterion	Summary of Criterion Considerations
(1) Private and public benefits and costs	“Drainage projects” require viewing to determine benefited property, benefits, and damages, after the Preliminary Survey Report. For that report, this criterion can only be considered on a preliminary basis. The project benefits must be greater than the total project costs. This criterion includes consideration of both private and public benefits and costs.
(2) Alternative measures	This multipurpose water management criterion is a requirement to consider alternative measures for beneficial use of water, reducing downstream peak flows and flooding, providing adequate drainage capacity, reducing erosion and sedimentation, and protecting or improving water quality. This is very important in relation to comprehensive local water planning and implementation, including One Watershed, One Plan.
(3) Present and anticipated land use	Local land use plans of counties or cities in a project area can be an important consideration for a drainage project, especially in relation to urban development and expansion. Because local water plans and land use plans are comprehensive and multipurpose, they should be consulted early in the project scoping and preliminary design process.
(4) Current and potential flooding characteristics	This criterion requires evaluation of the 5-, 10-, 25- and 50-yr. flood events for existing and proposed conditions of the drainage project, as well as the adequacy of the outlet, which should consider both hydraulic capacity and stability of the outlet. The drainage project should not cause or increase erosion, sedimentation or flood damages downstream, without compensation provided to owners of property that would be damaged.

Criterion	Summary of Criterion Considerations
(5) Effects on Wetlands	Addressing this criterion should include consideration of: the state Wetland Conservation Act (WCA) (consult the applicable WCA Local Government Unit contact); the federal Clean Water Act, Section 404, and the Rivers and Harbors Act, Section 10 (consult the U.S. Army Corps of Engineers, St. Paul District); the federal Food Security Act and Farm Bill wetland compliance provisions (consult the USDA Natural Resources Conservation Service, Minnesota); and any other applicable wetland permitting or approval requirements. Note that “public water wetlands” may involve Minnesota Public Waters considerations discussed below in a separate subsection.
(6) Effects on water quality	Public drainage systems can be a significant source of erosion and sedimentation, as well as nutrient transport, if not designed to avoid these effects to the extent practicable, including during construction. This criterion requires consideration of water quality effects of the drainage project and associated design to mitigate those effects. This involves consideration of federal Clean Water Act, Section 401 certification and National Pollution Discharge Elimination System (NPDES) construction stormwater permitting (consult the Minnesota Pollution Control Agency). See also MPCA fact sheet wq-strm2-17, Drainage Ditch Projects, Guidance Regarding NPDES/SDS Construction Stormwater Permit Requirements, February 2009 . Comprehensive local water plans, including One Watershed, One Plan can be important references for considering this criterion.
(7) Effects on fish and wildlife	Drainage projects must consider potential impacts on existing fish and wildlife resources, including aquatic and upland habitat. Some Chapter 103E drainage systems are channelized streams or otherwise have perennial flow and substantial aquatic habitat. Fish and wildlife habitat, fish passage at hydraulic structures and potential erosion and/or sedimentation may be important considerations. A two-stage ditch is an important BMP design consideration for channelized streams. In some situations, Minnesota Endangered Species law (Minn. Stat. § 84.0895 Protection of Threatened and Endangered Species and associated Minn. Rules) may apply to a drainage project. The DNR fisheries and wildlife managers can assist in identifying potential project effects and mitigation measures, as applicable.
(8) Effects on shallow groundwater	This criterion is applicable where drainage of shallow groundwater could affect other natural resources or beneficial uses of water. Groundwater Restoration and Protection Strategies, Groundwater Management Plans and/or Source Water Protection Plans, where available, can be applicable reference documents to help define considerations and opportunities.

Criterion	Summary of Criterion Considerations
(9) Overall environmental impact	<p>This criterion is a requirement to consider the collective effects of all the above criteria in the engineer’s report and by the drainage authority. The Minnesota Environmental Policy Act (MEPA) might also apply. A drainage project can require environmental review in accordance with Minn. Stat. Chapter 116C Environmental Quality Board, Chapter 116D Environmental Policy, and Minn. R. Chapter 4410 Environmental Review. The mandatory Environmental Assessment Worksheet (EAW) categories can be found in Minn. R. Part 4410.4300 Mandatory EAW Categories and the mandatory Environmental Impact Statement (EIS) categories in Minn. R. Part 4410.4400 Mandatory EIS Categories. The Environmental Quality Board website page Guidance for Practitioners and Proposers provides applicable information.</p>

Additional information and guidance regarding environmental considerations can be found in [MPDM Chapter 2. Administrative and Legal Issues, Section I. Administration and legal considerations before initiating a project or repair](#) and in [MPDM Chapter 3. Engineering and Environmental Considerations – Specific environmental considerations](#).

3.7 Public Waters

Minnesota public waters are defined in [§ 103G.005 Definitions., Subd. 15. Public waters](#), including natural and altered watercourses, lakes, and wetlands. These public waters were inventoried and designated through a public process and are listed, as well as mapped, to identify their approximate location. DNR [Public Waters Inventory \(PWI\) maps](#) are available on the DNR website. Note that dashed lines on the PWI maps denote watercourses which are designated as both public waters and public drainage systems. Drainage project work in public waters may require DNR permission ([§ 103E.011 Drainage Authority Powers., Subd. 3. Commissioner's permission; work in public waters; application](#)). A drainage project that substantially affects public waters requires a Public Waters Work Permit ([§ 103G.245 Work in Public Waters., Subd. 2. Exceptions., \(2\)](#)) and may require mitigation. The DNR has developed guidance titled “[Public Waters Authority over Work Done in Public Drainage Systems](#)”, February 28, 2018. The [DNR Area Hydrologist](#) is a point of contact regarding public waters considerations for drainage projects.

3.8 Filing of Preliminary Survey Report and Transmittal

The Engineer must file the Preliminary Survey Report in duplicate with the applicable county auditor or watershed district secretary, who is responsible to transmit the report to the drainage authority and send a copy to the DNR Commissioner, and to the BWSR if the drainage authority is a watershed district. ([§ 103E.251 Filing Preliminary Survey Report](#) and [§ 103D.711 Engineer’s Report, Subd. 5. Advisory reports](#).) If the drainage authority is a joint county board, a copy of the report must also be sent to the auditor of each affected county. The DNR Commissioner has designated regional office email addresses on the DNR [Public Drainage Ditch Systems](#) webpage to submit public drainage system documents.

3.9 DNR Preliminary Advisory Report and BWSR Advisory Report

In accordance with [§ 103E.255 Commissioner’s Preliminary Advisory Report](#), the DNR must review the Engineer’s Preliminary Survey Report (aka Preliminary Engineer’s Report) and prepare a DNR Commissioner’s Preliminary Advisory Report. If the drainage authority is a watershed district, BWSR

reviews the Preliminary Engineer's Report and prepares a BWSR Advisory Report, in accordance with [§ 103D.711 Engineer's Report., Subd. 5. Advisory reports.](#) The BWSR Chief Engineer has lead responsibility for watershed district engineer's report review and BWSR Advisory Reports, including for drainage projects.

Section 103E.255 requires the DNR to (paraphrased):

- 1) provide an advisory opinion about the adequacy of the Preliminary Survey Report, including any additional investigation and evaluation that should be done relating to public waters that may be affected and the § 103E.015, subdivision 1 criteria; and
- 2) cite specific portions of the report that are determined inadequate.

Section 103E.711, Subd. 5 directs BWSR and DNR to provide review and an advisory report for watershed district engineer's reports for petitioned projects. BWSR interprets this to include petitioned "drainage projects". The advisory report is to include:

- (1) a statement on whether the engineer's report is incomplete and not in accordance with this chapter;
- (2) a statement of whether the engineer's report is approved as being a practical plan;
- (3) if the project as planned does not meet approval, recommendations for changes considered advisable must be stated or an opinion that the proposed project or improvement is not practical; and
- (4) a recommendation as to whether a soil survey appears advisable.

The DNR advisory report is to be filed with the applicable county auditor or watershed district secretary before the preliminary hearing. Section 103E.255 includes provision for the DNR to request up to a 2-week extension (from the date of request) for filing the commissioner's preliminary advisory report. However, a request for an extension of time to file the report may not be made more than five days after the date of the notice by the auditor that a date is to be set for the preliminary hearing. Section 103D.711 requires the BWSR advisory report to be filed with the watershed district board of managers within 30 (thirty) days after receiving the project report. The preliminary hearing can proceed without these advisory reports, if the reports are not received by the drainage authority within the statutory time before, or at, the hearing. These advisory report(s) should be carefully considered at the preliminary hearing and during further project development to help ensure a practical plan and defensibility of drainage authority considerations regarding public waters and § 103E.015 requirements.

3.10 Notice of Preliminary Hearing

When the Preliminary Engineer's Report is filed, the county auditor or watershed district secretary must promptly notify the drainage authority and coordinate to obtain an order for a hearing date, time and location within 30 days of the date of the order. At least 10 days before the hearing, the drainage authority in consultation with the auditor or secretary, must give notice of the hearing by mail to the petitioners, owners of property, and political subdivisions likely to be affected by the project defined in the Preliminary Survey Report. Although not required, it may be advisable to publish the notice in a legal newspaper in the area.

3.11 Preliminary Hearing Purpose, Proceedings, Findings and Order

The primary purpose of the preliminary hearing ([§ 103E.261 Preliminary Hearing.](#)) is to assess whether the drainage project is feasible and practical before more substantial costs are incurred for: final design; construction plans and specifications; and viewing to determine benefited properties, benefits and

damages of the project. The scope, environmental effects and costs of the proposed project can change as a result of the preliminary hearing. If the project is found to be not feasible, the project proceedings are dismissed at this preliminary phase. Key steps in the preliminary hearing process include:

- 1) The Preliminary Engineer's Report is presented by the engineer, and the DNR and BWSR advisory reports, as applicable, are read and included in the hearing record. The petitioners and all other interested parties may appear and provide testimony.
- 2) The drainage authority must consider the sufficiency of the petition and, if insufficient, refer it back to the petitioners for required unanimous amendment, adjourning the hearing until a specified date. The petitioners may also obtain signatures of additional petitioners. If the petition is not resubmitted when the hearing is reconvened or does not meet legal requirements, the proceedings must be dismissed. Other statutory reasons for required dismissal of the proceedings include:
 - a) the proposed drainage project is not feasible;
 - b) the adverse environmental impact is greater than the public benefit and utility after considering the environmental, land use, and multipurpose water management criteria in section 103E.015, subdivision 1, and the engineer has not reported a plan to make the proposed project feasible and acceptable;
 - c) the proposed drainage project is not of public benefit or utility; or
 - d) the outlet is not adequate.

If the drainage authority finds the proposed project to be not feasible, its attorney should be instructed to prepare findings and an order of dismissal to be presented at a regular meeting of the drainage authority.

- 3) If the drainage authority determines:
 - a) the proposed drainage project outlined in the petition, or modified and recommended by the engineer, is feasible;
 - b) there is necessity for the proposed drainage project;
 - c) the proposed drainage project will be of public benefit and promote the public health, after considering the environmental, land use, and multipurpose water management criteria in section 103E.015, subdivision 1; and
 - d) the outlet is adequate, then - -

The drainage authority must state, by order, its findings and any changes that must be made in the proposed project outlined in the petition and Preliminary Survey Report, including changes necessary to minimize or mitigate adverse impact on the environment. Required changes may be described in general terms or outlined on a map. The order to continue the proceedings prepared by the drainage authority's attorney, along with the findings and accompanying documents, must be filed with the applicable county auditor or watershed district secretary, who must present them at a regular meeting of the drainage authority. The order modifies the petition and must be considered with the petition in all further proceedings. The findings and order are conclusive only for the petition, the need for a detailed survey and for the parties shown by the Preliminary Survey Report as likely to be affected. All questions relating to the practicability and necessity of the proposed drainage project are subject to additional investigation and consideration at the final hearing.

- 4) If the outlet for the proposed drainage project is an existing Chapter 103E drainage system, the drainage authority may determine that the outlet is adequate and obtain permission to use the existing drainage system as an outlet. The drainage authority must assign a number to the

proposed drainage project and proceed under [Section 103E. 401 Use of Drainage System as Outlet](#) to act on behalf of the proposed project.

3.12 Orders for a Detailed Survey Report and Viewers Appointment

When preliminary hearing findings and an order to continue a drainage project proceeding are filed with the applicable county auditor or watershed district secretary, the drainage authority must order the engineer to conduct a Detailed Survey and prepare a Detailed Survey Report (aka Final Engineer's Report) as soon as possible. ([§ 103E.265 Order for Detailed Survey and Survey Report.](#)) At that time, the drainage authority must also order the appointment of three (3) disinterested residents of Minnesota qualified to assess benefits and damages to serve as viewers for the drainage project. The drainage authority may establish qualifications for viewers. ([§ 103E.305 Viewers' Appointment and Qualification.](#)) However, the auditor or watershed district secretary, as applicable, does not order the first meeting of the viewers until after the Detailed Survey Report is filed (within 5 days, thereof). ([§ 103E.305 Viewers' Appointment and Qualification., Subd. 2. Auditor's order for first meeting.](#))

3.13 Detailed Survey Report

The primary purposes of the Detailed Survey Report (aka Final Engineer's Report) are to further develop the project plan in the Preliminary Survey Report, including construction plans and associated report documentation for drainage authority decision making and future reference. Key areas to address, include:

- any alternative measures or other proposed plan changes identified during the preliminary hearing or the final design process;
- resolution of any public waters, other environmental, or technical issues identified in the DNR (and BWSR, as applicable) preliminary advisory reports and by other coordination by the engineer (e.g., WCA; CWA, Section 404; RHA, Section 10; USDA Swampbuster; utilities; and any associated permit, permission or certification needed); and
- resolution of any other considerations identified in the preliminary hearing and final design process.

Following is an outline of Detailed Survey Report information and content required by [§ 103E.285 Detailed Survey Report](#) and other applicable provisions of Chapter 103E, and some associated guidance.

- 1) The engineer can vary from the plan in the Preliminary Hearing Order and Petition, in accordance with [§ 103E.275 Engineer's Variance from Drainage Authority Order.](#), if necessary to drain the property likely to be assessed for the drainage project. However, major changes at this stage can be troublesome in the project development process and typically are avoided by good alternatives analyses and preliminary design when preparing the Preliminary Survey Report.
- 2) Although Chapter 103E provides for conducting a soil survey, if necessary ([§ 103E.281 Soil Survey.](#)), the USDA has nearly statewide coverage of soil surveys in Minnesota available via the [Web Soil Survey](#). That soils data, together with experience in the project area regarding ditch side slope stability and construction, typically provide adequate soils information for final design of open ditches and/or subsurface tile. More specific geotechnical investigation and analyses should be conducted, utilized and reported, as needed.
- 3) Following is a summary of required contents of the Detailed Survey Report (see [§ 103E.285 Detailed Survey Report](#) for specific text) and recommended content.
 - a) map(s) / construction plans of the proposed project, drawn to scale, showing:

- (1) the course and terminus of each drain and whether it is a ditch or tile;
 - (2) location and situation of the outlet;
 - (3) the watershed of the project and the subwatershed(s) of main branches, with the location of existing highway bridges and culverts;
 - (4) all property affected, with the names of known owners;
 - (5) public roads and railways affected;
 - (6) the outline of any lake basin, wetland or public water body affected; and
 - (7) other physical characteristics of the watershed necessary to understand the proposed drainage project and the affected drainage system; and
 - (8) the area to be acquired to maintain ditch buffer strip(s) under section 103E.021.
- b) profile(s) of the drainage system, including: elevations of the ground surface and proposed invert at 100-ft. stations; the station number at each section line and property line; and drainage ditch bottom width(s) and side slopes, or tile size;
 - c) design plans and hydraulic capacities for proposed bridges and culverts to be constructed, minimum hydraulic capacities for other bridges and culverts, and estimated costs of proposed highway bridges and culverts for the viewers to determine benefits and damages;
 - d) right-of-way acreage for ditch(es), including permanent 1-rod buffer strips required by [§ 103E.021 Planting Ditches with Perennial Vegetation., Subdivision 1. Requirements; spoil banks and permanent vegetation.](#) on each government lot, 40-acre tract, or fraction thereof under separate ownership;
 - e) if an adequate outlet for the drainage system requires right-of-way through property in an adjoining state, definition of the associated right-of-way and estimated costs (see [§ 103E.405 Outlets in Adjoining States.](#));
 - f) any recommendations for dividing construction into sections or stages to control costs;
 - g) a tabular statement of construction features, quantities, unit costs, engineering and administration during construction, and total costs;
 - h) final engineer examination and recommendations regarding consideration of the specific environmental, land use and multipurpose water management criteria in [§ 103E.015, Subdivision 1.](#), including resolution of any wetland or utility concerns, and any associated permits, permissions or certifications required;
 - i) final consideration and resolution of any project effects on public waters, and any associated DNR permission or permit required (see DNR guidance document [“Public Waters Authority over Work Done in Public Drainage Systems”, Feb. 28, 2018](#));
 - j) final results of investigating potential external sources of funding for eligible purposes to support a multipurpose project ([§ 103E.015, Subd. 1a.](#));
 - k) final consideration of determining public benefit, utility or welfare ([§ 103E.015, Subd. 2.](#));
 - l) other information to inform the drainage authority about the practicability and necessity of the project and to inform its findings.

Additional information and guidance is provided in [MPDM Chapter 3. Engineering and Environmental Considerations, Section IV. Detailed survey and engineer's final report](#), as well as in [Section V. Adequacy of outlet](#) and in [Section VI. New drainage systems, improvements, laterals and other modifications of drainage system](#). This includes guidance regarding hydrology, hydraulic design, channel geometry, erosion control, and ditch buffer strips. The Final Survey Report provides critical information

for the drainage authority to make final decisions about the drainage project and to support next steps. It's a responsibility of the engineer to present a practical plan, to the extent feasible.

3.14 Filing of Detailed Survey Report and Transmittal

The engineer must file the Final Survey Report in duplicate with the applicable county auditor or watershed district secretary, who is responsible to transmit the report to the drainage authority and send a copy to the DNR Commissioner, in accordance with [§ 103E.291 Filing Detailed Survey Report](#). (See designated regional email address under **Contact** on the [DNR Public Drainage Ditch Systems webpage](#).) If the drainage authority is a joint county board, a copy of the report must also be sent to the auditor of each affected county.

[Section 103D.711 Engineer's Report., Subd. 5. Advisory reports](#) does not differentiate between a preliminary and final watershed district engineer's report, while [§ 103D.625 Drainage Systems in Watershed District., Subd. 3. Procedure for repair or improvement., and Subd. 4. Construction or improvement](#) require that all Chapter 103E proceedings for drainage systems administered by a watershed district must conform to Chapter 103E. Advisory comments on a Preliminary Engineer's Report generally are most timely and valuable in the design process. For these reasons, BWSR typically only provides an advisory review and report on the Preliminary Survey Report for petitioned "drainage project" proceedings conducted by a watershed district. However, BWSR can provide advisory review of a Detailed Survey Report (aka Final Engineer's Report), if requested by the watershed district drainage authority, such as if major design changes are made between the preliminary and final reports.

3.15 Commissioner's Final Advisory Report

In accordance with [§ 103E.301 Commissioner's Final Advisory Report](#), the DNR must review the Detailed Survey Report and make a final advisory report to the drainage authority within 30 days of receipt of the Detailed Survey Report. This advisory report must state whether the Commissioner (some paraphrasing):

- 1) finds the detailed survey report is incomplete and not in accordance with the provisions of Chapter 103E, specifying the incomplete or nonconforming provisions;
- 2) approves the detailed survey report as an acceptable plan to drain the property affected;
- 3) does not approve the plan and makes recommendations for changes;
- 4) finds the project is not of public benefit or utility under the criteria in section 103E.015, subdivision 1, specifying facts and evidence supporting the findings; or
- 5) finds a soil survey is needed and makes a request to the engineer to make a soil survey.

The advisory report must be filed with the applicable county auditor or watershed district secretary of the drainage authority. The final hearing can proceed without this advisory report, if the report is not received by the drainage authority within the statutory time limit before the hearing, or at the hearing.

3.16 Viewers' Report

The applicable county auditor or watershed district secretary must order the first meeting of the 3 appointed viewers within 5 days after the Detailed Survey Report is filed. At the first meeting, the viewers must subscribe to an oath to faithfully perform their duties. ([§ 103E.305 Viewers' Appointment and Qualifications., Subd. 2. Auditor's order for first meeting.](#))

The Viewers' Report must define benefits and damages for each lot, 40-acre tract, and fraction of a lot or tract under separate ownership. Determination of benefited properties and benefits becomes the

basis for apportionment of “drainage project” investigation, design and construction costs, as well as for the required “drainage project” benefits vs. costs test. Viewing can require significant time, due to the detailed work involved and the availability of viewers. **Section 6. VIEWING** of this Handbook and [MPDM Chapter 4. Viewing and Appraising](#) provide more information about viewing and the Viewers’ Report.

3.17 Property Owners’ Report

In accordance with [§ 103E.323 Property Owners’ Report.](#), within 30 days after the Viewer’s Report is filed, the applicable county auditor or watershed district secretary is responsible to prepare a Property Owners’ Report, based on the information in the Viewers’ Report, listing all the properties affected by the project and the applicable benefits and damages determined. It is common that the viewers assist the auditor or secretary in completing this report, which requires somewhat different information than the Viewers’ Report. Information that is available from the viewers.

For each property owner benefited or damaged by the proposed drainage project, the Property Owners’ Report is to show:

- 1) the name and address of the property owner;
- 2) each lot or tract and its area that is benefited or damaged;
- 3) the total number and value of acres added to a tract or lot by the proposed drainage of public waters, wetlands, and other areas not currently being cultivated;
- 4) the number of acres and amount of benefits being assessed for drainage of areas which before the drainage benefits could be realized would require a public waters work permit to work in public waters under [Minn. Stat. § 103G.245](#) to excavate or fill a navigable water body under [United States Code, title 33, section 403](#), or a permit to discharge into waters of the United States under [United States Code, title 33, section 1344](#);
- 5) the number of acres and amount of benefits being assessed for drainage of areas that would be considered conversion of a wetland under [United States Code, title 16, section 3821](#), if the area was placed in agricultural production;
- 6) the damage, if any, to riparian rights;
- 7) the amount of right-of-way acreage required;
- 8) the amount that each tract, or lot, will be benefited or damaged;
- 9) the net damages or benefits to each property owner;
- 10) the estimated cost to be assessed to the property owner based on the cost of the drainage project in the engineer’s detailed survey report; and
- 11) a copy of the benefits and damages statement under [§ 103E.321 Viewers’ Report., Subd. 2. Benefits and damages statement., paragraph \(a\)](#), relating to the property owner.

The auditor or secretary must mail a copy of the report to each owner of property affected, or if the report is quite large, a separate benefit and damage statement for each property may be mailed and the complete report made available at the auditor’s or secretary’s office and at the final hearing. The Property Owners’ Report can be mailed together with the Notice of Final Hearing. **Section 6. VIEWING** of this Handbook and [MPDM Chapter 4. Viewing and Appraising, Viewers’ Report / Property Owners’ Report, D. Property Owners’ Report](#), provide additional information about the Property Owners’ Report, including footnote references in the MPDM.

3.18 Final Hearing Order and Notice

In accordance with [§ 103E.325 Hearing Notice.](#), promptly after the Viewers' Report and the Commissioner's Final Advisory Report are filed, the drainage authority and applicable county auditor or watershed district secretary must set a time and location by order for the final hearing on the Petition, the Detailed Survey Report, and the Viewers' Report. The hearing must be set 25 to 50 days after the date of the final hearing notice. Notice of the time and location of the final hearing must be given:

- by publication (presumably in a legal newspaper in the area);
- by posting at the courthouse of each affected county, at least 3 weeks before the date of the final hearing; and
- by mail, within one week after the first publication of the notice to the DNR commissioner, all property owners, and others affected by the proposed drainage project and listed in the Detailed Survey Report and the Viewers' Report.

The notice must state:

- 1) that the petition is pending;
- 2) that the Detailed Survey Report is filed with the applicable drainage authority;
- 3) that the Viewers' Report is filed with the applicable drainage authority;
- 4) the time and place set for the final hearing;
- 5) a brief description of the proposed drainage project and affected drainage system, giving in general terms the starting point, terminus, and general course of the main ditch or tile and branches;
- 6) a description of property benefited and damaged, and the names of the owners of the property (Attaching the Property Owners' Report fulfills this requirement.); and
- 7) identification of the municipal and other corporations affected by the proposed drainage project as shown by the Detailed Survey Report and Viewers' Report.

Names may be listed in a narrative form and property affected may be separately listed in narrative form by governmental sections or otherwise. For a joint county proceeding, separate notice may be prepared for each county affected, showing the portion of the proposed drainage project and the names and descriptions of affected property in the county. The [MPDM Chapter 2. Administrative and Legal Issues, Section V. Final Hearing, D. The Final Hearing](#) includes [Template A](#) for an order for the final hearing and [Template B](#) for the final hearing notice. Provisions to cure a defective notice are addressed in [§ 103E.035 Defective Notice.](#)

3.19 Final Hearing Proceedings, Findings, and Final Order

Final Hearing

Following is a summary of key requirements and elements of the final hearing, in accordance with [§ 103E.335 Proceedings at Final Hearing](#) and [§ 103E.405 Outlets in Adjoining States.](#):

- 1) the engineer or engineer's assistant (engineer recommended), and at least one viewer (lead viewer recommended), must be present;
- 2) the drainage authority must hear and consider the testimony of all interested parties;
- 3) the DNR may appear and testify regarding the Commissioner's Final Advisory Report, or the report read during the hearing;

- 4) if the drainage authority determines that the plan reported by the engineer may be improved by changes, the drainage authority may amend the Detailed Survey Report and make necessary and proper findings in relation to the report, or resubmit matters to the engineer for immediate consideration;
- 5) the drainage authority may adjourn and reconvene the final hearing, as necessary;
- 6) if the drainage authority determines that the viewers have made an inequitable determination of benefits and damages to any property, the drainage authority may amend the Viewers' Report and make necessary and proper findings in relation to the report, or resubmit matters to the viewers for immediate consideration;
- 7) if matters are resubmitted to the engineer and/or viewers, they must proceed promptly to reconsider the resubmitted matters and file an amended report;
- 8) if the drainage authority determines that property not included in the notice should be included and assessed or reexamined, the drainage authority may resubmit the Detailed Survey Report to the engineer, the Viewers' Report to the viewers, or both, for reexamination of the proposed drainage project or the property benefited and damaged by the system and preparation of reexamination report(s), and continue the hearing;
- 9) if a reexamination report includes property not included in the original report(s), the drainage authority may, by order, adjourn the hearing and direct the county auditor or watershed district secretary to serve or publish, post, and mail a final hearing notice, including all property not included in the previous notice;
- 10) if it is determined that an adequate outlet for the drainage system is through property in an adjoining state, the drainage authority may adjourn the hearing and require the auditors of affected counties, or the watershed district, to acquire option(s) for the needed right-of-way; and
- 11) at, or after the hearing, the drainage authority must consider the petition for the drainage project with all matters pertaining to the Detailed Survey Report, the Viewers' Report, and the Commissioner's Final Advisory Report.

Findings and Final Order

Table 3-3. Possible Outcomes of Final Hearing and Final Order presents a summary of the two possible outcomes of the final hearing and order, in accordance with [§ 103E.341 Drainage Authority Final Order](#).

Table 3-3. Possible Outcomes of Final Hearing and Final Order

The drainage authority must dismiss the proceedings by order , if it finds:	The drainage authority must establish the drainage project by order , if it finds:
<ol style="list-style-type: none"> 1. The benefits of the proposed project are less than the total cost, including damages; 2. The proposed drainage project will not be of public benefit and utility; or 3. The proposed drainage project is not practicable after considering the environmental, land use, and 	<ol style="list-style-type: none"> 1. The Detailed Survey Report and Viewers' Report have been made and applicable proceedings have been completed under Chapter 103E; 2. The reports made or amended are complete and correct; 3. The damages and benefits have been properly determined;

<p>multipurpose water management criteria in § 103E.015, Subdivision 1.</p>	<p>4. The estimated benefits are greater than the total estimated costs, including damages;</p> <p>5. The proposed drainage project will be of public utility and benefit, and will promote the public health; and</p> <p>6. The proposed drainage project is practicable.</p>
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The Final Order must contain the drainage authority’s findings. An order to establish a drainage project must adopt and confirm the Engineer’s Final Survey Report and the Viewers’ Report as made or amended and establish the drainage project as reported and amended. A final order to establish should also:

- 1) define the length of time, by number of annual installments not to exceed 20 years, in which lien assessments may be paid;
- 2) state the interest rate charged on the drainage lien, which may not exceed the rate set by the state court administrator for judgments under [§ 549.09 Interest on Verdicts, Awards, and Judgments.](#), or 6 percent, whichever is greater ([§ 103E.611 Paying Drainage Liens and Interest.](#)); and
- 3) if the project is a joint county project, apportion the share of the establishment and construction costs to be assessed and paid by each respective county ([§ 103E.345 Apportioning Cost for Joint County Drainage Systems.](#)).

An order to dismiss or to establish a drainage project must be filed with the applicable county auditor or watershed district secretary. It is recommended that the Final Order be date and time stamped, because of the 30-day time limit for appeals. Additional important information about the Final Hearing and Final Order can be found in [MPDM Chapter 2. Administrative and Legal Issues, Section V. Final Hearing](#) and [Section VII. Funding Collection and Payment of Drainage System Costs, Introduction.](#)

Possible Appeal of Final Order

In accordance with [§ 103E.095 Appeal from Orders Dismissing or Establishing Drainage Systems.](#), an order for dismissal of the project proceedings or for establishment of a drainage project may be appealed by filing an appeal with the applicable county auditor or watershed district secretary within 30 days of the Final Order being filed. In accordance with [§ 103E.091 Appeals.](#), the findings in the Final Order regarding project benefits, damages, fees or expenses allowed, and compliance with the § 103E.015, Subdivision 1 criteria may be appealed by filing an appeal with the applicable county auditor or watershed district secretary within 30 days of the Final Order being filed.

Additional information can be found in **Section 7. APPEALS** of this Handbook and in [MPDM Chapter 2. Administrative and Legal Issues, Section VII. Appeals and other litigation.](#)

3.20 Construction Plans, Specifications, Contract, and Bond

With consideration of any appeal(s) after a final order establishing a drainage project is filed, the engineer prepares the final construction plans and specifications, as directed by the drainage authority. In accordance with [§ 103E.501 Contract and Bond.](#), the drainage authority attorney, the engineer (and the attorney for the petitioners, as appropriate) prepare the construction contract, which must include the project plans and specifications, and the contractor performance and payment bond, which must be for at least 75% of the contract price. These documents must include the provisions required by [§ 103E.501 Contract and Bond](#) and by [§ 574.26 Contractors’ Bonds for Public Work.](#) This includes the

right of the drainage authority and engineer to inspect and approve the project construction and to change the project design during construction, as circumstances require, in accordance with [§ 103E.501 Contract and Bond, Subd. 3. Contract. and Subd. 4. Contract provisions for changes during construction.](#) However, such changes must not substantially alter the character or usefulness of any part of the drainage system or increase the total project cost by more than 10% of the original contract price; cause the cost to exceed the total benefits; or cause detrimental effects to the public interest under the criteria in § 103E.015, Subdivision 1.

The **contract** and **contractor performance and payment bond** are critical during project construction and acceptance to protect the interests of the drainage authority, the engineer, and the property owners assessed for the project, and to ensure project completion. If any portion of the work is to be done by an agency of the United States, a contract and bond is not necessary for that portion of the work, except as required by the agency of the United States. See [MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, C. The Construction Contract and Bond](#) for additional guidance.

3.21 Bidding and Awarding of Construction Contract

Note that Chapter 103E alone is not completely clear about all applicable provisions of law and good administrative practice regarding advertisement for bids and selection of a contractor. Drainage project construction contracting is subject to:

- [§ 471.345 Uniform Municipal Contracting Law.](#), including the different procurement methods categorized by estimated project cost that involve competitive sealed bids, quotations and negotiations, or a “best value alternative”;
- [§ 103E.505 Awarding Construction Contract.](#); and
- [§ 103E.511 Contract not Awarded; Excessive Bids or Costs.](#)

County contracting is also subject to [§ 375.21 Contracts of County Boards.](#), while watershed district contracting is also subject to [§ 103D.811 Bids for Construction](#) and [§ 103D.815 Controlling Contracts.](#) The requirements of these provisions address advertising for bids or proposals, bid or proposal selection, and contract awarding, including a timing criterion for awarding a drainage project contract.

Potential Division of Work

The contract may be written, bid and awarded as one job, in sections, or separately for labor and materials. ([§ 103E.505 Awarding Construction Contract., Subd. 5. How contract may be awarded.](#)) [Section 103E.501 Contract and Bond., Subd. 6. Tile work; separate contract; guarantee](#) includes provisions for affected persons to submit a written request to the applicable county auditor or watershed district secretary to contract tile work separately and require the contractor to guarantee the contract tile work for 3 years. If applicable, the advertisement for bids must include this requirement. When a project requires different types of contractor capabilities, it is typically advisable to divide the project into sections to avoid subcontracting for which the drainage authority has less control over subcontractor capabilities and selection.

Invitation for Bids and Notice of Contract Awarding

In accordance with [§ 103E.505 Awarding Construction Contract., Subd. 3. Notice of contract awarding.](#), the applicable county auditor or watershed district secretary must publish notice of the time and location of a drainage authority meeting to review bids and award a contract in a legal newspaper in the county or counties where the project is to be constructed. If the estimated project cost is more than

\$25,000, the notice must also be published in a construction trade newspaper. The requirements for the notice also are applicable requirements in an invitation for bids. The notice must state:

- 1) time and location for awarding the contract;
- 2) the approximate amount of work and its estimated cost;
- 3) that bids may be for the work as one job, or in sections, or separately, for bridges, ditches, and open ditch work, tile, or tile construction work, if required or advisable;
- 4) that each bid must be accompanied by a certified check or a bond furnished by an approved security corporation payable to the drainage authority for 10 percent of the bid, as a security that the bidder will enter into a contract and give a bond as required by [§103E.501 Contract and Bond.](#); and
- 5) that the drainage authority reserves the right to reject any and all bids.

Although not clearly stated in Chapter 103E, it is recommended that these requirements in the notice of contract awarding also be included in the invitation for bids. Note that there are two types of bonds included in requirement 4) above. The first is a bid bond for 10 percent of the bid and the second is a construction performance and payment bond for at least 75 percent of the accepted contract price to be provided by the contractor when a contract is signed.

As an alternative to purely cost competitive bids, an invitation for bids and contract may be noticed, bid and awarded based on the “best value alternative” defined in [§ 16C.28, Contracts; Award., Subdivision 1. Award requirements., paragraph \(a\), clause \(2\), and paragraph \(c\).](#) ([§ 103E.505 Awarding Construction Contract., Subd. 5. How contract may be awarded.](#) This requires the relative weight of price and other selection criteria to be defined in the invitation for bids. The best value alternative and limitations for its use are addressed in [§ 471.345 Uniform Municipal Contracting Law.](#) See [MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, B. Procedure for Awarding the Construction Contract](#) for additional information.

For a county or joint county project, the invitation for bids (aka request for proposals) must be published two consecutive weeks in a legal newspaper in the county or counties where the work is to be done. ([§ 375.21 Contracts of County Boards., Subd. 1. Procedure, conditions.](#)) For a watershed district project, publication only needs to be done once and does not have to be published as a legal notice in the county where the project is pending. Instead, [§ 103D.811 Bids for Construction., Subd. 2. Bid notice](#) requires publication “in at least one of the newspapers in the state where notices are usually published.”

Selecting Contractor and Awarding Contract

The project engineer must attend the meeting to select a contractor and award a contract for a drainage project to ensure that each bid conforms to the plans, specifications and invitation for bids. A bid must be rejected if it is not responsive to the invitation for bids, including compliance with the project plans and specifications.

The contract for a purely cost competitive bid method must be awarded to the lowest responsible bidder. When bidding is conducted under the “best value alternative” method, the contract must be awarded to the lowest responsible bidder after applying the weighted selection criteria. The lowest bid is not necessarily the lowest responsible bidder. The drainage authority may find a bidder to be irresponsible based on reasonable, documented judgment of integrity, skill, ability, and the likelihood of the bidder performing faithful and satisfactory work. Prior unsatisfactory work by the bidder may justify the drainage authority to reject the bid. If the lowest bid is rejected, the drainage authority may accept the next lowest bid. If the drainage authority wishes more time to consider the bids, it may take the

awarding meeting under advisement and adjourn, notifying the bidders of its decision by mail. In so doing, the drainage authority should check the bid specifications for limitations on the length of time that the drainage authority may hold a bidder to its bid. A contract may be awarded if there is only one satisfactory bid from a responsible bidder. If no satisfactory bid is received, the drainage authority may reject all bids and may then re-advertise (i.e., publish a new invitation for bids).

A bid that in exceeds the engineer's estimated cost of construction, or the benefits less damages and other costs, by more than 30% may not be selected. [Section 103E.511 Contract not Awarded; Excessive Bids or Costs](#) provides a process to address this situation, including a petition to reconsider the detailed survey report and viewers' report, a hearing, and an order. See **Section 5. OTHER PROCEEDINGS OR PROCEDURES** in this Handbook for details about § 103E.511. Additional information is provided in [MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, B. Procedure for Awarding the Construction Contract, 3. Procedure if Contract not Awarded Due to Bids or Costs.](#)

If no satisfactory bid is received after a second invitation for bids and no petition is received for adjustment of the engineer's cost estimate or the viewers' report in accordance with § 103E.511 within a reasonable time, the drainage authority may rescind the order establishing the drainage project, dismiss the petition for the drainage project as not feasible, and order the petitioners to pay the costs of the proceedings.

If an appeal of the final order is made within 30 days after the order establishing the drainage project was filed (the appeal window for the final order), a contract may not be awarded until the appeal has been resolved, unless a satisfactory bid from a responsible bidder is received and the drainage authority orders the contract awarded. The auditor of an affected county, or an interested person, may request the drainage authority to make the order. If the request is not made by the auditor of an affected county, the auditors of the affected counties must be given notice five days before a hearing on the request. ([§ 103E.505 Awarding Construction Contract, Subd. 2. Pending appeal of benefits and damages.](#)) It is recommended that the drainage authority only proceed to award a contract if the benefits so far exceed the damages and costs that even if an appeal of benefits and damages is successful, it would not undermine the project.

A contract to construct a drainage project is authorized by the chair or president of the drainage authority, and the auditor of each affected county or secretary of the applicable watershed district, in the names of their respective drainage authority or county. Additional information and guidance is provided in [MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, B. Procedure for Awarding the Construction Contract](#), including [Template A: Notice of Award](#) to a contractor.

3.22 Project Damages and Liens

Drainage Lien Statement

When a contract for construction of a drainage project is awarded, the applicable county auditor or watershed district secretary must make a statement of all project costs. The auditor of each affected county must prepare a tabular drainage lien statement for each property affected in the county, in accordance with [§ 103E.601 Drainage Lien Statement](#). The total project costs for establishment and construction must be prorated based on the benefits determined in the final viewers' report for each tract of property. Damages by tract must be included in the tabulation. The net liability cannot exceed the benefits determined for the tract. Damages less assessments are to be ordered and paid before the

property is entered for construction. ([§ 103E.515 Damages; Payment.](#)) The tabular drainage lien statement must show:

- 1) the names of the property owners, corporate entities, or political subdivisions of the county benefited or damaged by the construction of the drainage project in the viewers' report as approved by the final order for establishment;
- 2) the description of the property in the viewers' report, and the total number of acres in each tract according to the county tax lists;
- 3) the number of acres benefited or damaged in each tract shown in the viewers' report;
- 4) the amount of benefits and damages to each tract of property as stated in the viewers' report and confirmed by the final order that established the drainage project unless the order is appealed and a different amount is set; and
- 5) the amount each tract of property will be liable for and must pay to the county for the establishment and construction of the drainage project.

Other Chapter 103E Drainage Lien Provisions

For “drainage projects”, the interest rate on the drainage lien principal from the date the drainage lien statement is recorded must be set by the drainage authority but may not exceed the rate determined by the state court administrator for judgments under [§ 549.09 Interest on Verdicts, Awards, and Judgments.](#), or six percent, whichever is greater. ([§ 103E.611 Paying Drainage Liens and Interest., Subd. 2. Interest.](#)) A drainage lien on property has priority over all mortgages, charges, encumbrances and other liens, unless the drainage authority subordinates the drainage lien to liens of record. ([§ 103E.605 Effect of Filed Drainage Lien.](#))

Sections of Chapter 103E that are pertinent to drainage system liens include:

- [§ 103E.605 Effect of Filed Drainage Lien.](#)
- [§ 103E.611 Paying Drainage Liens and Interest.](#)
- [§ 103E.615 Enforcing Assessments.](#)
- [§ 103E.621 Satisfying Liens.](#)
- [§ 103E.625 Subdivision by Platting; Liens Apportioned.](#)
- [§ 103E.631 Apportioning Liens.](#) (See **Section 5. OTHER PROCEEDINGS OR PROCEDURES** in this Handbook for details.)

Additional information and guidance can be found at [MPDM Chapter 2. Administrative and Legal Issues, Section VIII. Funding Collection and Payment of Drainage System Costs, A. Drainage Liens.](#)

3.23 Construction Financing

In accordance with [§ 103E.655 Paying Drainage System Costs., Subd. 2. Insufficient funds; transfer from other accounts.](#), if the drainage system account does not have funds sufficient for project construction, the drainage authority may, by unanimous resolution:

- transfer (borrow) from other drainage system accounts, or
- transfer (borrow) from drainage authority general revenue funds.

The drainage system must pay interest on the transferred amount at the same annual rate charged on drainage project liens. ([§ 103E.611 Paying Drainage Liens and Interest., Subd. 2. Interest.](#))

After the contract for the construction of a drainage project is awarded, the board of an affected county or watershed district may issue bonds in an amount necessary to pay the cost of establishing and constructing the drainage project. ([§ 103E.635 Drainage Bond Issues., Subdivision 1. Authority.](#), and [§](#)

[103E.641 Drainage Funding Bonds.](#)) Four types of bonds are identified in § 103E.635, as well as applicable provisions for their use.

1. **Drainage bonds** are a general obligation bond used to pay the cost of establishing and constructing a drainage project when temporary drainage bonds are not used. The term of a drainage bond may not exceed 23 years and is payable annually or semiannually.
2. **Temporary drainage bonds** are used to finance ongoing construction when the project takes more than a year to complete. The bonds have a 2 year or less maturity and may be called at any time without a premium. The county could sell “permanent” drainage bonds and pay off the temporary bonds (the county could replace the temporary bonds with definitive drainage bonds).
3. **Definitive drainage bonds** are issued solely for the purpose of replacing the temporary drainage bonds. The only difference between a definitive drainage bond and a regular drainage bond is that the definitive drainage bond is designed to be numbered and mature serially at times and in amounts to allow the principal and interest to be paid when due by collection of assessments levied for drainage systems financed by issuance of temporary drainage bonds.
4. **Drainage funding bonds** are general obligation bonds used to cover a cash flow shortfall in one or more drainage system accounts or common drainage redemption fund to meet current principal and interest obligations and those due within one year. By their nature, they should be of relatively short term (no more than 2 to 5 years in maturity).

If county treasury funds are used to pay drainage bonds, temporary drainage bonds, and definitive drainage bonds, reimbursement from assessments on the applicable drainage systems or from the sale of drainage funding bonds with interest at a rate of seven percent per year for the time the money is actually needed. ([§ 103E.635 Drainage Bond Issues., Subd. 11. How bonds may be paid.](#)) See also [MPDM Chapter 2. Administrative and Legal Issues, Section VIII. Funding Collection and Payment of Drainage System Costs, B. Drainage Bond Issues, C. Accounting, and D. Funding of Watershed Districts and Projects.](#) Subsection C. Accounting and D. Funding of Watershed Districts and Projects provide pertinent information about the many different drainage system accounts, including for construction.

3.24 Construction Inspection and Partial Payments

The drainage authority must require the engineer to inspect the project during construction for compliance with plans, specifications and the contract for construction. ([§ 103E.521 Construction Supervision.](#)) The engineer reports monthly to the drainage authority, providing a certificate of partial payment for work completed. Partial payment costs are apportioned to the applicable county(ies). ([§ 103E.531 Inspecting Drainage Construction; Partial Payments.](#))

[MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, C. The Construction Contract and Bond](#) includes additional information and guidance regarding: **1. Contract Changes During Construction; 2. Guaranty of Tile Work; 3. Contractor’s Default; 4. Inspection of Drainage Construction and Partial Payments; 5. Extension of Time on Contract.** Other applicable provisions of Chapter 103E include:

- [§ 103E.535 Partial Payment of Retained Contract Amounts.](#) (See **Section 5. OTHER PROCEEDINGS OR PROCEDURES** for more information.);
- [§ 103E.541 Extending Time on Contracts.](#);
- [§ 103E.545 Reducing Contractor’s Bond.](#) (See **Section 5. OTHER PROCEEDINGS OR PROCEDURES** for more information.); and
- [§ 103E.551 Contractor Default.](#)

3.25 Project Acceptance Hearing

When construction of a drainage project is complete, the engineer makes a final report to the drainage authority summarizing costs, work completed, amounts paid, and the unpaid balance. ([§ 103E.555 Accepting Contract, Subdivision 1. Engineer’s report and notice.](#)) When the report is filed, the applicable county auditor or watershed district secretary must set a time and location for a hearing on the report and give notice to the owners of affected property by publication or by mail at least 10 days before the hearing. The notice must state that the report is filed, the time and location for the hearing, and that a party objecting to the acceptance of the contract may appear and be heard.

In accordance with [§ 103E.555 Accepting Contract, Subd. 2. Hearing.](#), the intent of the project acceptance hearing is to give any person who has a complaint about the completed work an opportunity to be heard and any issues resolved. Typical complaints might be that the contractor damaged crops in excess of that allowed by the viewers for damages, the contractor failed to bury stumps and brush deep enough to permit agricultural operations on the ground surface, or the contractor failed to properly install side inlets to allow water to drain into the open ditch from a field. [MPDM Chapter 2. Administrative and Legal Issues, Section VI. Construction of Drainage Project, D. Hearing for Final Acceptance of Project](#) provides guidance about how to address paying for any additional project work identified as being needed at the project acceptance hearing.

At the hearing, the drainage authority may, by order, direct payment of the balance due if it determines that the contract has been completed in accordance with the plans and specifications and any complaints have been resolved. If good cause is shown, the drainage authority may waive any part of the liquidated damages accruing under the contract. When the order is filed, the auditor shall draw a warrant on the treasurer of the affected county(ies) for the balance due on the contract. For a joint county drainage project, the applicable county auditor makes an order to the auditors of the affected counties to pay for their proportionate shares of the balance due on the contract. After receiving the order, the auditor of each affected county draws a warrant on the treasurer of the county for the amount specified in the order. For a watershed district drainage project, the watershed district secretary coordinates with the auditor(s) of the affected counties.

3.26 Final Revised Project Report and As-Built Drawings

In accordance with [§ 103E.295 Revising Engineer’s Detailed Survey Report After Acceptance.](#), after final acceptance of the drainage project, the engineer must revise the as-built plans, profiles, and designs of structures to show the drainage project as actually constructed (as-built report and drawings). The engineer must file the revised detailed survey report and as-builts with the applicable county auditor or watershed district secretary, who must file the final report and as-builts in the permanent record for the project and forward a copy to the DNR Director of the Division of Ecological and Water Resources.

Section 4. DRAINAGE SYSTEM REPAIRS

The property owners who pay for a Chapter 103E drainage system have a vested interest and property right in maintaining the drainage system, and the drainage authority has a responsibility to maintain the drainage system on their behalf. ([§ 103E.705 Repair Procedure.](#)) Factors that can necessitate maintenance / repair include such things as weed and tree control, sedimentation, erosion, ditch bank sloughing, and deterioration of a hydraulic structure or subsurface tile. Natural deterioration can be aggravated by upstream or adjacent field erosion, tillage encroachment along a drainage ditch, or natural disasters such as flooding. The definition of “repair” is in [§ 103E.701 Repairs., Subdivision 1.](#)

Definition., as shown below. Maintenance or restoration of “hydraulic capacity”, “effectiveness”, and “efficiency” of the drainage system are key components of the repair definition that must be considered together with:

- [§ 103E.015, Subd. 2. Determining public utility, benefit, or welfare.](#);
- other applicable provisions of Chapter 103E; and
- other applicable law, such as public waters and wetland protection laws and rules.

§ 103E.701 Repairs., Subdivision 1. Definitions.

The term "repair," as used in this section, means to restore all or a part of a drainage system as nearly as practicable to the same hydraulic capacity as originally constructed and subsequently improved, including resloping of ditches and leveling of spoil banks if necessary to prevent further deterioration, realignment to original construction if necessary to restore the effectiveness of the drainage system, and routine operations that may be required to remove obstructions and maintain the efficiency of the drainage system. "Repair" also includes:

- (1) incidental straightening of a tile system resulting from the tile-laying technology used to replace tiles; and
- (2) replacement of tiles with the next larger size that is readily available, if the original size is not readily available.

The terms “maintenance” and “repair” are not clearly distinguished in Chapter 103E. However, there is a distinction between “repairs based on inspection” and “petitioned repairs”, based primarily on how a repair is initiated. The terms “routine maintenance” and “minor repair” typically are associated with “repairs based on inspection”. Although “repair based on inspection” can include “major repair”, drainage authorities often prefer to receive a petition for a major repair to demonstrate affected property owner support and to enable the appointment of an engineer to investigate and make recommendations regarding a major repair.

4.1 General Repair Provisions

Repairs Affecting Public Waters

[Section 103E.701 Repairs., Subd. 2. Repairs affecting public waters](#) requires that before a repair is ordered, the drainage authority must notify the DNR Commissioner if the repair may affect public waters. If the commissioner disagrees with the repair depth, the engineer, a representative appointed by the DNR Director of the Division of Ecological and Water Resources, and a soil and water conservation district technician must jointly determine the repair depth using soil borings, field surveys, and other available data or appropriate methods. This as-constructed and subsequently improved condition (ACSIC), can be critical for consideration of the need for, and costs of, wetland mitigation measures for repairs, as applicable. Costs for determining the repair depth beyond the initial meeting are to be shared equally by the drainage system and the DNR. The majority determined repair depth must be recommended to the drainage authority. The drainage authority may accept the majority recommendation and proceed with the repair.

The DNR published the guidance document [“Public Waters Authority over Work Done in Public Drainage Systems”, February 28, 2018](#) to help clarify DNR authority and responsibilities regarding public waters that apply to Chapter 103E drainage systems. See **Section II. General Guidance for Repairs of Public Drainage Systems** within the document. The [DNR Area Hydrologist](#) is a point of contact.

Repair of Bridges and Culverts

See the following subdivisions of [§ 103E.701 Repairs](#) for applicable provisions.

- [Subd. 4. Bridges and culverts.](#)
- [Subd. 5. Constructing road instead of bridge or culvert.](#)
- [Subd. 6. Compensation to landowners instead of bridge or culvert repair.](#)

Wetlands and Water Quality

[Section 103E.701 Repairs., Subd. 6. Wetland restoration and replacement; water quality protection and improvement](#) enables the repair of a drainage system to include preservation, restoration or enhancement of wetlands, wetland replacement under [§ 103G.222 Replacement of Wetlands.](#), the realignment of a drainage system to prevent drainage of a wetland, and the incorporation of measures to reduce channel erosion and otherwise protect or improve water quality. This is an important provision enabling multipurpose measures that can reduce future drainage system maintenance to be incorporated into repairs. This includes the use of external sources of funding for multipurpose benefits, in accordance with [§ 103E.011 Drainage Authority Powers., Subd. 5. Using external sources of funding](#) and [§ 103E.015 Considerations Before Drainage Work is Done., Subd. 1a. Investigating potential use of external sources of funding and technical assistance.](#)

Conservation Practice Restoration

[Section 103E.701 Repairs., Subd. 7. Restoration; disturbance or destruction by repair](#) applies to a perennial vegetative cover or structural conservation practice existing under a federal or state conservation program adjacent to, or in, a drainage system right-of-way. If a drainage system repair disturbs or destroys such a conservation practice, the practice must be restored according to the applicable conservation practice plan or as determined by the drainage authority, if a practice plan is not available, and the costs paid by the drainage system.

Repairs not Subject to Bidding Requirements

In accordance with [§ 103E.705 Repair Procedure., Subd. 5. Repairs not subject to bidding requirements.](#), certain repairs can be done with hired labor and equipment without advertising for bids or entering into a contract for the repair work, if the drainage authority finds that the estimated cost of the repair and maintenance of a drainage system for 1 year will be less than the greater dollar amount:

- requiring the solicitation of sealed bids under [§ 471.345 Uniform Municipal Contracting Law., Subd. 3. Contracts over \\$175,000.](#); or
- \$1,000 per mile of open ditch in the drainage system.

Annual Repair Assessment Levy Limit

In accordance with [§ 103E.705 Repair Procedure., Subd. 6. Annual Repair Assessment Levy Limits.](#), in 1 calendar year the drainage authority may not levy a repair assessment on one drainage system for more than the greater of:

- 20% of the benefits of record for the drainage system;
- \$1,000 per mile of open ditch in the drainage system; or
- the dollar amount requiring the solicitation of sealed bids under [§ 471.345 Uniform Municipal Contracting Law., Subd. 3. Contracts over \\$175,000.](#)

Repair after Disaster

In accordance with [§ 103E.705 Repair Procedure., Subd. 7. Repairs and construction after disaster.](#), the drainage authority may repair and reconstruct a drainage system without advertising for bids and without regard to a cost greater than \$1,000 per mile of open ditch in the drainage system, if:

- 1) a drainage system is destroyed or impaired by floods, natural disaster, or unforeseen circumstances;
- 2) the area where the drainage system is located has been declared a disaster area by the President of the United States and federal funds are available for repair or reconstruction; and
- 3) the public interests would be damaged by repair or reconstruction being delayed.

4.2 Environmental Considerations and Best Management Practices

Key environmental considerations for drainage system repairs involve laws and rules that may apply regarding public waters, wetlands, water quality, and navigable waters, as well as construction stormwater permitting. There are permit and compliance exemptions that may or may not apply to a drainage system repair. Consideration should be given to:

- Minnesota Wetland Conservation Act (WCA) (consult the applicable [WCA Local Government Unit contact](#)).
- Federal Clean Water Act, Section 404, and the Rivers and Harbors Act, Section 10 (consult the [U.S. Army Corps of Engineers, St. Paul District](#)).
- Federal Food Security Act and Farm Bill wetland compliance provisions (consult the [USDA Natural Resources Conservation Service, Minnesota](#)).
- Federal Clean Water Act, Section 401 certification and National Pollution Discharge Elimination System (NPDES) construction stormwater permitting (consult [Minnesota Pollution Control Agency](#)).

See also [MPCA fact sheet wq-strm2-17, Drainage Ditch Projects, Guidance Regarding NPDES/SDS Construction Stormwater Permit Requirements, February 2009](#), which addresses drainage ditch projects that do and don't require a construction stormwater permit.

Additional information and guidance regarding environmental considerations can be found in [MPDM Chapter 2. Administrative and Legal Issues, Section I. Administration and legal considerations before initiating a project or repair](#) and [MPDM Chapter 3. Engineering and Environmental Considerations – Specific environmental considerations](#).

Best management practices for drainage system repairs typically are focused on erosion control practices and drainage system stability during and after the repair. See subsection **4.1 General Repair Provisions, Wetlands and Water Quality** and **Section 8. BEST MANAGEMENT PRACTICES** regarding multipurpose measures in “repair” projects that can reduce future maintenance.

4.3 Apportionment of Repair Costs

The costs of a repair anywhere on a drainage system are paid on a pro rata basis by all the owners of property that are benefited by and/or contribute runoff to the drainage system, in accordance with [§ 103E.728 Apportioning Repair Costs](#) or [§ 103E.729 Apportioning Repair Costs; Alternative Option](#). The § 103E.728 apportionment method is based on the drainage system benefits of record either prior determined by viewers and approved by the drainage authority for a “drainage project” on the system, which could be out-of-date, or prior redetermined for the drainage system in accordance with [§ 103E.351 Redetermining Benefits and Damages](#).

The alternative § 103E.729 apportionment method is based on relative runoff and relative sediment delivery from all properties contributing runoff to the drainage system. This alternative repair cost apportionment method was added to Chapter 103E in 2019, based on recommendations of the stakeholder Drainage Work Group. Runoff and sediment delivery to a drainage system are key factors affecting the use of its hydraulic capacity, its erosion potential and associated repairs, as well as the need for sediment clean-out. This option was added to Chapter 103E with a 5-year trial period sunset date of July 31, 2024, which can be changed by legislative process.

4.4 Repairs Based on Inspection

Inspection

The drainage authority is responsible for regular inspection of all of the Chapter 103E drainage systems it administers, in accordance with [§ 103E.705 Repair Procedure., Subdivision 1. Inspection.](#) That subdivision specifies inspection by a committee of the drainage authority or a drainage inspector, while [§ 103E.065 Drainage Inspectors.](#) requires a drainage inspector. The drainage authority specifies the appointment period and compensation of a drainage inspector, who cannot be a county commissioner. Section 103E.705, Subdivision 1 also requires that open drainage ditches be inspected at least once every 5 years, unless a violation of the [§ 103E.021](#) ditch buffer strip requirement is found, in which case annual inspection is required until one year after the violation is corrected.

Inspection Report

The drainage inspector must prepare an inspection report to the drainage authority that identifies any portion(s) of a drainage system that need maintenance / repair, including the required ditch buffer strips. ([§ 103E.705 Repair Procedure., Subd. 3. Inspection report.](#)) An inspection report can, and often does, serve as a basis for initiating non-petitioned maintenance / repair of a drainage system, if the drainage authority determines it is necessary and in the best interests of the affected property owners.

Perennial Vegetation Inspection and Compliance

Ditch buffer strip inspection and compliance enforcement procedures are defined in [§ 103E.705 Repair Procedure., Subd. 2. Perennial vegetation; inspection and compliance notice.](#), and [§ 103E.021 Planting Ditches with Perennial Vegetation., Subd. 4. Compliance work by drainage authority.](#) These provisions require the drainage authority to inspect drainage ditches for violations of § 103E.021 buffer strips. If buffer strips are not being maintained in compliance with § 103E.021, a compliance notice must be sent to the property owner stating:

- 1) the date the ditch was inspected;
- 2) the person(s) making the inspection;
- 3) that spoil banks are to be spread in a manner consistent with the plan and function of the drainage system and that the drainage system has acquired a permanent strip of perennial vegetation, according to § 103E.021;
- 4) the violations of § 103E.021;
- 5) the measures that must be taken by the property owner to comply with § 103E.021 and the date when the property must be in compliance; and
- 6) that if the property owner does not comply by the date specified, the drainage authority will perform the work necessary to bring the area into compliance with § 103E.021 and charge the cost of the work to the property owner.

If a property owner does not bring an area into compliance with § 103E.021 as provided in the compliance notice under [§ 103E.705, Subd. 2](#), the inspection committee or drainage inspector must notify the drainage authority. In accordance with [§ 103E.021, Subd. 4](#), the drainage authority must issue an order to have the work performed to bring the property into compliance. After the work is completed, the drainage authority must send a statement of the expenses incurred to bring the property into compliance to the auditor of the county where the property is located and to the property owner.

Incremental Ditch Buffer Strips and/or Side Inlet Controls

In accordance with [§ 103E.021, Subd. 6. Incremental establishment; vegetated buffer strips and side inlet controls.](#), the drainage authority may make findings and order the establishment of 16.5-ft., permanent ditch buffer strips of perennial vegetation or side inlet controls, or both, “where necessary to control erosion and sedimentation, improve water quality, or maintain the efficiency of the drainage system.” This provision was added in 2007, based on a recommendation of the stakeholder Drainage Work Group, and must be implemented as a repair. Following is a summary of steps in the process to use this repair provision.

- The drainage authority may appoint an engineer to examine the drainage system and prepare an engineer’s repair report.
- Damages must be determined by the drainage authority, or viewers appointed by the drainage authority, to acquire the necessary permanent drainage system right-of-way.

A damages statement must be prepared in accordance with [§ 103E.315 Assessing Drainage Benefits and Damages., Subd. 8 Extent of Damages.](#), and filed with the applicable county auditor or watershed district secretary.

- Within 30 days thereof, the auditor or watershed district secretary must prepare a Property Owners’ Report, in accordance with [§ 103E.323 Property Owners’ Report., Subdivision 1. Report., clauses \(1\), \(2\), \(6\), \(7\) and \(8\)](#) and mail a copy of the report and damage statement to each owner of property affected.
- After a damages statement is filed, the drainage authority must set a time, by order, not more than 30 days after the date of the order, for a hearing on the project. At least 10 days before the hearing, the auditor or watershed district must give notice by mail of the time and location of the hearing to the owners of property and political subdivisions likely to be affected by the project.
- The drainage authority must make findings and order the repairs, if it determines from the evidence presented at the hearing and by the engineer and viewers, if appointed, that the repairs are necessary for the drainage system and the costs of the repairs are within the limitations of [§ 103E.705 Repair Procedure.](#)

Repair Based on Inspection – Process Summary

Figure 4-1(a. & b.) Process Summary for “Repairs Based on Inspection” in Appendix 1. Drainage Proceedings and Procedures Process Charts outline the sequence of steps for repairs based on inspection, including the applicable sections of Chapter 103E.

4.5 Petitioned Repairs

In accordance with [§ 103E.715 Repair by Petition.](#), an individual or an entity interested in or affected by the drainage system may file a petition to repair a drainage system. This includes the drainage authority. The drainage authority may hold a hearing on the petition before appointing an engineer. The requirements of [§ 103E.202 Petitions](#) apply to “petitioned repairs.”

Engineer Appointment and Repair Report

In accordance with [§ 103E.715 Repair by Petition., Subd. 2. Engineer’s repair report.](#), if the drainage authority determines that the drainage system needs repair, it must appoint an engineer to examine the drainage system and prepare a repair report. The report must show:

- the necessary repairs,
- the estimated cost of the repairs, and
- all details, plans and specifications necessary to prepare and award a contract for the repairs.

Notice of Hearing

When the repair report is filed, the applicable county auditor or watershed district secretary must promptly notify the drainage authority and together with the drainage authority set a time by order not more than 30 days after the date of the order for a hearing on the repair report. At least 10 days before the hearing, the applicable county auditor or watershed district secretary must give notice by mail of the time and location of the hearing to the petitioner(s) and owners of property and political subdivisions likely to be affected by the repair. ([§ 103E.715 Repair by Petition., Subd. 3. Notice of hearing.](#))

Hearing on the Repair Report, Findings and Order

The drainage authority must make findings and order the repair if:

- 1) the drainage authority determines from the repair report and evidence presented that the recommended repairs are necessary for the best interests of the affected property owners; or
- 2) the repair petition is signed by the owners of at least 26% of the property area affected by and assessed for the drainage system, and the drainage authority determines that the drainage system is in need of repair and no longer serves its original purpose, and the cost of the repair will not exceed the total benefits determined in the original drainage system proceeding.

The order must direct the applicable county auditor or watershed district secretary and chair of the board, or for a joint county drainage system the auditors of the affected counties, to prepare and award a contract for repair of the drainage system, as described in the repair report and determined necessary by the drainage authority, and in the manner provided in Chapter 103E for construction of a “drainage project”. ([§ 103E.715 Repair by Petition., Subd. 4. Hearing on repair report.](#))

Petitioned Repair Requiring Appointment of Viewers

[“§ 103E.715 Repair by Petition., Subd. 6. Repair by resloping ditches, incorporating multistage ditch cross-section, leveling spoil banks, installing erosion control, or removing trees.](#) (a) For a drainage

system that is to be repaired by resloping ditches, incorporating a multistage ditch cross-section, leveling spoil banks, installing erosion control measures, or removing trees, before ordering the repair, the drainage authority must appoint viewers to assess and report on damages and benefits, if it determines that:

- 1) the repair will require the taking of any property not contemplated and included in the proceeding for the establishment or subsequent improvement of the drainage system; or
- 2) any spoil bank leveling or tree removal will directly benefit property where the spoil bank leveling or tree removal is specified.

(b) The viewers must assess and report damages and benefits as provided by [§ 103E.315](#) and [§ 103E.321](#). The drainage authority shall hear and determine the damages and benefits as provided in [§ 103E.325](#), [§ 103E.335](#), and [§ 103E.341](#). The hearing shall be held within 30 days after the property owners' report is mailed. Damages must be paid as provided by section [§ 103E.315](#) as a part of the cost

of the repair, and benefits must be added to the benefits previously determined as the basis for the pro rata assessment for the repair of the drainage system for the repair proceeding only.”

Note that [§ 103E.729 Apportioning Repair Costs; Alternative Option](#) provides an alternative way to apportion repair costs.

Project Steps from Bidding Through As-Builts

These steps are the same as for “drainage projects”, as indicated above for the **Hearing on Repair Report, Findings and Order**. [MPDM Chapter 3. Engineering and Environmental Considerations, Section VII. Repair/Maintenance of Drainage Systems](#) provides additional information and guidance.

Petitioned Repair – Process Summary

Figure 4-2(a. & b.) Process Summary for “Petitioned Repairs” in **Appendix 1. Drainage Proceedings and Procedures Process Charts** outline the sequence of steps for petitioned repairs, including the applicable sections of Chapter 103E.

Section 5. OTHER PROCEEDINGS OR PROCEDURES

Figure 1-1. Categories and Types of Drainage Proceedings and Procedures in Section 1. **F** **INTRODUCTION** of this Handbook identifies 22 types of “Other Proceedings or Procedures” authorized in Chapter 103E. These proceedings or procedures have varying requirements for petitions and other process, while all require a hearing involving the drainage authority.

5.1 Initiated by Notice, Motion or Petition

The following “other proceedings or procedures” can be initiated by petition, or by a resolution of the drainage authority and/or the action of the applicable auditor or watershed district secretary to schedule a hearing, as summarized in **Table 5-1. Initiation of Certain “Other Proceedings or Procedures”**. Requirements for petitioners and petitions are summarized in **Table 5-2. Petition Requirements for “Other Proceedings or Procedures”**.

Table 5-1. Initiation of Certain “Other Proceedings or Procedures”

Other Proceeding or Procedure	How It’s Initiated
§ 103E.075 Obstructing Drainage System.	Drainage authority notice to person or other entity responsible for a drainage system obstruction.
§ 103E.101, Subd. 4a. Reestablishing records.	Drainage authority motion, or petition from any party affected by the drainage system.
§ 103E.245, Subd. 2. Limitation of survey.	Drainage authority determination of need to expand the area to be surveyed and notice of hearing.
§ 103E.351 Redetermining Benefits and Damages.	Drainage authority determination of need for redetermination, and motion; or petition by more than 26% of owners of property benefited or damaged and drainage authority determination of need.
§ 103E.555 Accepting Contract.	Auditor or watershed district secretary notice of hearing after receiving engineer’s report on contract completion.

<u>§ 103E.721 Replacement and Hydraulic Capacity of Bridges and Culverts.</u>	Drainage authority and auditor or watershed district secretary notice of hearing after receiving engineer’s hydraulic capacity report.
<u>§ 103E.741 Property not Assessed Benefits; Hearing.</u>	Drainage authority and auditor or watershed district secretary notice of hearing after receiving engineer’s repair report with map of additional benefited property.
<u>§ 103E.801 Consolidating or Dividing Drainage Systems.</u>	Drainage authority motion after redetermination of benefits and damages, or petition from any party interested in or affected by the drainage system.

5.2 Initiated by Petition Only

The following “other proceedings or procedures” can only be initiated by petition. Requirements for petitioners and petitions are summarized in **Table 5-2. Petition Requirements for “Other Proceedings or Procedures”** below.

- [§ 103E.227 Impounding, Rerouting, and Diverting Drainage System Waters.](#)
- [§ 103E.231 Dismissing or Delaying Proceedings; Petitioners.](#)
- [§ 103E.345 Apportioning Cost for Joint County Drainage Systems.](#)
- [§ 103E.401 Use of Drainage System as Outlet.](#)
- [§ 103E.411 Drainage System as Outlet for Municipality.](#)
- [§ 103E.511 Contract Not Awarded; Excessive Bids or Costs.](#)
- [§ 103E.535 Partial Payment of Retained Contract Amount.](#)
- [§ 103E.545 Reducing Contractor’s Bond.](#)
- [§ 103E.631 Apportioning Liens.](#)
- [§ 103E.711 Cost Apportionment for Joint County Drainage Systems.](#)
- [§ 103E.805 Removing Property from Drainage System.](#)
- [§ 103E.806 Partial Abandonment of Drainage System.](#)
- [§ 103E.811 Abandoning Drainage System.](#)
- [§ 103E.812 Transfer of All or Part of Drainage System.](#)

Table 5-2. Petition Requirements for “Other Proceedings or Procedures”

Proceeding or Procedure	Who Can File a Petition	Other Petition Requirements
Reestablishing Records <u>§103E.101, Subd. 4a.</u>	<ul style="list-style-type: none"> • Any party affected by the drainage system. 	<ul style="list-style-type: none"> • Request reestablishment of drainage system records.

Proceeding or Procedure	Who Can File a Petition	Other Petition Requirements
<p>Impounding, Rerouting, and Diverting Drainage System Waters § 103E.227</p>	<ul style="list-style-type: none"> • A person, public or municipal corporation, governmental subdivision, the state or a state agency or department, the commissioner of natural resources, the U.S. or any of its agencies. 	<ul style="list-style-type: none"> • Identify project location. • Include concept plan and map of areas likely affected. • Identify sources of funding & rationale for any drainage system funds requested. • \$10,000 bond required unless the petition is filed by a state agency/dept., U.S. agency, SWCD, WD or municipality.
<p>Dismissing or Delaying Proceedings; Petitioners. § 103E.231</p>	<ul style="list-style-type: none"> • For dismissal, a majority of petitioners who own at least 60% of the area owned by all petitioners, as defined in the original project petition. • For delay, a majority of the petitioners on the original project petition. 	<ul style="list-style-type: none"> • Request dismissal or delay of a drainage project proceeding.
<p>Apportioning Cost for Joint County Drainage Systems. § 103E.345</p>	<ul style="list-style-type: none"> • An auditor of a county affected by a joint county drainage project. 	<ul style="list-style-type: none"> • Request drainage authority determination of costs to be paid by affected counties.
<p>Redetermining Benefits and Damages § 103E.351</p>	<ul style="list-style-type: none"> • More than 26% of owners of property benefited or damaged by the system. or • Owners of more than 26% of the property benefited or damaged by system. 	<ul style="list-style-type: none"> • Request redetermination of drainage system benefits and damages.
<p>Use of Drainage System as Outlet § 103E.401</p> <p>Drainage System as Outlet for Municipality § 103E.411</p>	<ul style="list-style-type: none"> • Any person or drainage system with property not assessed for benefits by an established drainage system seeking authorization to use the established drainage system as an outlet. (§ 103E.401) • A municipality seeking authorization to use a drainage system as an outlet. (§ 103E.411) 	<ul style="list-style-type: none"> • For petition by a municipality: <ul style="list-style-type: none"> ○ Show necessity for use of the system as an outlet and that the use will be of public benefit & utility & promote public health. ○ Include a plat showing the locations of the drainage system and municipal system. ○ Include specifications showing connection plan.

Proceeding or Procedure	Who Can File a Petition	Other Petition Requirements
<p>Contract Not Awarded; Excessive Bids or Costs. § 103E.511</p>	<ul style="list-style-type: none"> A person interested in the applicable drainage project. 	<ul style="list-style-type: none"> Petitioner’s determination of mistake in engineer’s cost estimate or changes in plans & specs to reduce costs without impairing project. or If bids 30% over engr. est., or if unavoidable delay in construction completion, define inflation effects.
<p>Partial Payment of Retained Contract Amount § 103E.535</p>	<ul style="list-style-type: none"> Contractor for a contract exceeding \$50,000 that is 50% or more complete and not in default. 	<ul style="list-style-type: none"> Request payment for 40% of retained value.
<p>Apportioning Liens § 103E.631</p>	<ul style="list-style-type: none"> A person with interest in property having drainage lien, to apportion lien to portions of the tract. 	<ul style="list-style-type: none"> Principal and interest payments must not be in default.
<p>Cost Apportionment for Joint County Drainage Systems. § 103E.711</p>	<ul style="list-style-type: none"> The board of a county affected by a joint county not paying its share of a county’s annual repair cost statement. 	<ul style="list-style-type: none"> Show the nature and necessity of repairs made and costs. Request the drainage authority to apportion and order costs per county.
<p>Consolidating or Dividing Drainage Systems § 103E.801</p>	<ul style="list-style-type: none"> Any party interested in, or affected by, the drainage system. 	<ul style="list-style-type: none"> Request consolidation or division of a drainage system.
<p>Removing Property from Drainage System § 103E.805</p>	<ul style="list-style-type: none"> An owner of property in the benefited area of the drainage system. 	<ul style="list-style-type: none"> Request removal of property from a drainage system.
<p>Partial Abandonment of Drainage System § 103E.806</p>	<ul style="list-style-type: none"> An owner of property previously determined to benefit from the drainage system. 	<ul style="list-style-type: none"> Define the part of drainage system that is not of public benefit and utility and does not serve a substantial useful purpose to property remaining in the system.

Proceeding or Procedure	Who Can File a Petition	Other Petition Requirements
<p>Abandoning Drainage System § 103E.811</p>	<ul style="list-style-type: none"> • At least 51% of property owners benefited and assessed for the drainage system, <li style="text-align: center;">or • The owners of at least 51% of the property benefited and assessed for the drainage system. <p>Note: These can include a county as owner of tax-forfeited, assessed property.</p>	<ul style="list-style-type: none"> • Designate the drainage system proposed to be abandoned and show that the drainage system is not of public benefit and utility: <ul style="list-style-type: none"> ○ because the agricultural property that used the drainage system has been generally abandoned, or ○ because the drainage system has ceased to function, and restoration is not practical.
<p>Transfer of All or Part of Drainage System § 103E.812</p>	<p><i>For a drainage system outside the 7-County Metro and outside city boundaries:</i></p> <ul style="list-style-type: none"> • At least 51% of owners of property assessed for the drainage system or portion to be transferred. <li style="text-align: center;">or • Owners of not less than 51% of property assessed for the drainage system or portion to be transferred. and (required) • The proposed transferee water mgmt. authority. <p><i>For a drainage system wholly or partially within city boundaries:</i></p> <ul style="list-style-type: none"> • The city AND transferee water mgmt. authority. <p><i>For a drainage system in 7-County Metro and wholly or partially within a water mgmt. authority:</i></p> <ul style="list-style-type: none"> • The water mgmt. authority. 	<ul style="list-style-type: none"> • Designate the drainage system, or portion thereof, proposed to be transferred & show transfer is necessary for orderly water management, including water quality; • Indicate the impact, if any, of the transfer on properties utilizing the drainage system for an outlet or otherwise benefiting from the existence of the drainage system; and • Include an engineering report, prepared by the transferee water management authority, on the nature and extent of the drainage easement and the as constructed or subsequently improved depth, grade, and hydraulic capacity of the drainage system.

Table 5-3. Where to File a Petition for “Other Proceedings or Procedures”

<p>Petitions must be filed with the applicable county auditor or watershed district secretary representative of the county, joint county, or watershed district drainage authority, with the following additions or exceptions:</p>
<p>A petition for Impounding, Rerouting and Diverting Drainage System Waters of a joint county drainage system, must also be filed with the auditor of each of the other counties participating in the joint county drainage authority. (§ 103E.227 Impounding, Rerouting, and Diverting Drainage System Waters., Subdivision 1. Petition.)</p>
<p>A petition for Abandoning a Drainage System signed by a county as the owner of tax-forfeited land in the assessed area of the drainage system, must be made to the district court of the county and filed with the administrator of the court. If property assessed for benefits is in 2 or more counties, the petition must also be filed with the applicable county auditor. (§ 103E.811 Abandoning Drainage System., Subd. Filing petition; jurisdiction.)</p>
<p>For the Transfer of All or Part of a Drainage System:</p> <ul style="list-style-type: none"> • If the drainage system is administered by a county or joint county drainage authority and if all property assessed for benefits in the drainage system is in one county, the petition must be filed with the auditor unless the petition is signed by the board, in which case the petition must be made to the district court of the county where the drainage system is located and filed with the court administrator. If the board, acting as the drainage authority, is also the petitioning water management authority, the petition must be made to the district court for the county where the drainage system is located and filed with the court administrator. • If property assessed for benefits is in two or more counties, the petition must be filed with the auditor or court administrator of either (1) the county where the portion of the drainage system sought to be transferred exists; (2) the county not petitioning for the transfer; or (3) the county where the majority of the drainage system sought to be transferred exists. • If the drainage system is administered by the board of managers of a watershed district, the petition must be filed with the secretary of the watershed district. If the watershed district is also the petitioning water management authority, the petition must be filed with the court administrator consistent with the criteria in paragraph (a), clauses (1) to (3). <p>(§ 103E.812 Transfer of All or Part of Drainage System., Subd. 4. Filing petition; jurisdiction.)</p>

[MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings](#) and [Section VII. Appeals and Other Litigation](#) include additional information and guidance regarding these “other proceedings or procedures”.

5.3 Process Summary for “Other Proceedings or Procedures”

Figure 5-1. Process Summary for “Other Proceedings or Procedures” in **Appendix 1. Drainage Proceedings and Procedures Process Charts** outlines the basic sequence of steps for “other proceedings or procedures”, including the applicable sections of Chapter 103E.

5.4 Obstruction of a Drainage System ([§ 103E.075](#))

[Section 103E.075 Obstructing Drainage System](#) provides authority and process for resolving an installed obstruction of a drainage system. The drainage authority may learn of the presence of an obstruction of a drainage system, including installation of a bridge or culvert with insufficient hydraulic capacity, from the drainage inspector or inspection committee, or from an individual property owner.

Following is a summary of steps in the process for using this “other proceeding or procedure.”

- Typically, the drainage authority would first seek verification and information about the scope of the problem from the drainage inspector or inspection committee.
- If the drainage authority determines that a drainage system has been obstructed, the drainage authority must notify the person or public authority responsible for the obstruction as soon as possible and direct the responsible party to remove the obstruction or appear before the drainage authority and show why the obstruction should not be removed.
- The property owner or other responsible entity must be notified by certified mail at least ten days before a hearing on the issue.
- At the hearing, the drainage authority must hear all interested parties. If the drainage authority determines that the drainage system has been obstructed, it must order the obstruction removed by the responsible person or public authority within a reasonable time set in the order.
- If the obstruction is not removed by the prescribed time, the drainage authority must have the obstruction removed and the auditor or watershed district secretary shall make a statement of the removal cost. The statement must be filed in the county recorder's office as a lien on the property where the obstruction is located or against the responsible party.
- The lien must be enforced and collected as liens for drainage repairs under Chapter 103E, except that a lien may not be filed against private property if the drainage authority determines that the owner of the property is not responsible for the obstruction. The lien may be enforced against the responsible party by civil action.

5.5 Reestablishing Drainage System Records ([§ 103E.101, Subd. 4a.](#))

Lost, destroyed, or otherwise incomplete drainage system records pose a challenge for the drainage authority’s responsibility to maintain a Chapter 103E drainage system. In 2013, [§ 103E.101 Drainage Proceeding and Construction Records., Subd. 4a. Reestablishing records](#) was added to Chapter 103E, based on a recommendation of the stakeholder Drainage Work Group. The records to be reestablished include alignment; cross-section; profile; hydraulic structure locations, materials, dimensions and elevations; and right-of-way; as originally constructed or subsequently improved. The procedure must involve investigation of existing records and evidence, including, but not limited to, applicable aerial photographs, soil borings or test pits, culvert dimensions and invert elevations, and bridge design records. See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

Following is a summary of steps in the process for using this “other proceeding or procedure”.

- The drainage authority may initiate this proceeding for a drainage system on its own motion, or in response to a petition as indicated in **Table 5-1** and **Table 5-2** above.
- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.
- The drainage authority must appoint an engineer to investigate the drainage system and prepare a report of findings supported by existing records and evidence.
- After the engineer’s report is complete, the drainage authority in consultation with the applicable county auditor or watershed district secretary must set at time and location for a hearing and give notice by mail to the DNR, BWSR, the petitioner(s), and all property owners benefited or damaged by the drainage system, as well as in a newspaper of general circulation in the drainage system area or by publication on a website of the drainage authority.
- Based on the engineer’s report and other evidence presented at the hearing, the drainage authority makes findings and orders the reestablished drainage system records, which are then official records of the drainage system.

It is recommended that reestablishment of records for a drainage system that involves public waters be coordinated with the DNR early in the process, including during acquisition and interpretation of borings, test pits, and hydraulic structure elevations. See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, H. Reestablishment of Drainage System Records](#), including sample templates for a petition, hearing notice, and findings and order.

5.6 Impounding, Rerouting & Diverting Drainage System Waters ([§ 103E.227](#))

This provision enables drainage system waters to be impounded, rerouted, or diverted for beneficial uses. In accordance with [§ 103E.011 Drainage Authority Powers., Subd. 5. Using external sources of funding.](#), this can include wetland restoration, water quality, and/or flood control purposes using external sources of funding. Section 103E.227 is often used to enable wetland restoration on, or adjacent to, a Chapter 103E drainage system where drainage is inadequate and the property owner(s) participate in a state and/or federal conservation program. If the proposed project benefits the drainage system, the project proposer might request drainage system repair fund participation, in accordance with [§ 103E.701 Repairs., Subd. 6. Wetland restoration and replacement; water quality protection and improvement.](#)

Following is a summary of steps in the process for using this “other proceeding or procedure”.

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition (and associated bond, if required), and coordinate with the petitioner, if necessary, for an adequate petition. See **Table 5-2** for petition requirements and **Table 5-3** for where to the petition is filed.
- The drainage authority must appoint an engineer to investigate the proposed project installation and file a report of findings. This can be an engineer working on the proposed project installation for a state or federal program and participating property owner(s).
- After the engineer’s report is filed, the drainage authority and its representative provide notice and hold a public hearing, in accordance with [§ 103E.261 Preliminary Hearing.](#)
- The hearing is both preliminary and final. A separate final hearing is unnecessary because viewers are not needed.
- If at the hearing it appears from the engineer's report and other evidence presented that the project will be of a public or private benefit and that it will not impair the utility of the drainage

system or deprive affected landowners of its benefit, the drainage authority must make an order modifying the drainage system, to include the amount, if any, of drainage system funds approved for the project at the discretion of the drainage authority, and issue an order authorizing the project. The drainage authority shall consider the separable repair costs that will be avoided as a result of the petitioned project, as well as any other benefits of the project to the drainage system, when determining whether or how much to contribute to the petitioned project. The order must also identify the parties responsible for construction, operation and maintenance of the drainage system modification.

- The petitioner or drainage authority must acquire any public waters work permit or water use permit required from the DNR under Chapter 103G. **Waters of the State.**
- Before installing or constructing the project, the petitioner or drainage authority must obtain all required permits and all necessary rights-of-way and flowage easements from owners of land to be affected by it.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, F. Impounding, Rerouting, and Diverting Drainage System Waters](#), including example templates for a petition, resolution appointing an engineer, hearing notice, and order.

5.7 Dismissing or Delaying Proceedings; Petitioners ([§ 103E.231](#))

A majority of the petitioners owning at least 60% of the area owned by all of the petitioners, as defined in an original drainage project petition, can dismiss the associated proceeding. A petition for dismissal might occur if it appears that the drainage project will not be feasible, and the costs of the proceeding are mounting. A petition for delay might occur if the economic conditions of the petitioners take a major downturn and delaying the drainage project is prudent.

The drainage project proceeding may be dismissed at any time before the project is established, after payment of the cost of the proceeding by the petitioners. This invokes the joint and several petitioner liability for the costs of “drainage project” proceedings required in the original petition.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When a petition is filed with the applicable county auditor or watershed district secretary, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioners, if necessary, for an adequate petition.
- If a petition is for dismissal of the drainage project proceeding before the proposed drainage project is constructed, the drainage authority determines and assesses the cost the proceeding against the original petitioners, who are liable. After the proceeding costs are paid and the proceeding is dismissed by drainage authority order, any other action on the proposed drainage project must begin with a new petition.
- If the petition is for a delay in the drainage proceedings, the drainage authority must hold a hearing on the petition and may delay the proceedings. The delay may be for a period determined by the drainage authority. The drainage authority determines costs of the proceedings up to the time the proceedings are delayed and when the costs are to be paid, which may include interest on the costs due.

5.8 Apportioning Cost for Joint County Drainage Systems ([§ 103E.345](#))

This provision applies to a joint county proceeding to establish a drainage project. The drainage authority is required to determine and order the percentage of the cost of the drainage project to be paid by each affected county as part of the final order to establish the drainage project. The costs are

to be in proportion to the benefits received, unless there is a contrary reason. The auditor where the project petition was filed is required to file a certified copy of the viewers' report with the auditor of each affected county within 20 days after the date of the final order establishing the system / project. However, after the final order is made, an auditor of an affected county may petition the drainage authority to determine and order the percentage of costs to be paid by the affected counties.

Following is a summary of steps in the process for using this "other proceeding or procedure".

- After receiving a petition, the drainage authority must schedule a hearing and give written notice to the auditor of each affected county.
- The hearing is to be held 5 days after giving written notice.
- After giving notice of a hearing, the drainage authority may modify an order, or make another order, to allocate the cost among the affected counties.

5.9 Redetermining Benefits and Damages ([§ 103E.351](#))

There are two primary reasons why a drainage authority and/or benefited and assessed property owners within the watershed of a drainage system utilize this proceeding.

- 1) Many property owners have installed private drainage on their properties over time that changes land use and/or the benefits of drainage, utilizes the hydraulic capacity of the drainage system as the outlet, and may increase sediment contribution to the drainage system. Some or all of this property may not be within the benefited and assessed area of record of the drainage system. This creates unfair apportionment of repair costs.
- 2) Benefits and damages reflect the time and land use conditions when they are determined and Chapter 103E does not include provision to index benefits based on inflation or incremental land use change. This can limit the amount that can be assessed or spent for repair in one year.

Redetermination of benefits and damages enables the benefited area, benefits and damages of a drainage system to be updated.

The drainage authority can order a redetermination of benefits and damages on its own motion or in response to a petition, if it determines that the benefits or damages of record do not reflect reasonable present-day land values or that the benefited or damaged areas have changed. ([§ 103E.351 Redetermining Benefits and Damages., Subdivision 1. Conditions to redetermine benefits and damages; appointing viewers.](#)) See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

Following is a summary of steps in the process to use this "other proceeding or procedure".

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.
- The drainage authority appoints three viewers to redetermine and report benefits and damages, including the benefited and damaged areas of the drainage system.
- The viewers' report is filed with the applicable county auditor or watershed district secretary.
- The county auditor or watershed district secretary prepares a property owners' report (see [§ 103E.323 Property Owners' Report.](#)) and mails to each property owner affected by the drainage system.
- The drainage authority schedules, provides notice, and conducts a final hearing on the viewers' report, makes findings and an order, in accordance with the applicable provisions of [§ 103E.325](#)

[Hearing Notice](#), [§ 103E.335 Proceeding at Final Hearing](#), and [§ 103E.341 Drainage Authority Final Order](#).

- Redetermined benefits and/or damages can be appealed within 30 days of the drainage authority order, in accordance with [§ 103E.091 Appeals](#).
- After the drainage authority has made a final order redetermining benefits and damages, and all appeals are complete, the redetermined benefits and damages become the drainage system benefits and damages of record.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, I. Redetermination of Benefits and Damages](#), including sample templates for findings and orders.

5.10 Use of a Drainage System as an Outlet ([§ 103E.401](#), [§ 103E.411](#))

Property owners whose land is in the benefited and assessed area of a Chapter 103E drainage system have a right to outlet drainage from their benefited land into the established drainage system. In accordance with [§ 103E.401 Use of Drainage System as Outlet](#) and [§ 103E.411 Drainage System as Outlet for Municipality](#), other public or private drainage must seek and obtain approval from the drainage authority to outlet into an established drainage system, with or without a physical connection to the system. See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

An outlet fee is required to be paid by the applicable private property owner for outlet of private drainage, or by the benefited landowners of a proposed “drainage project” seeking an outlet to the established drainage system, or by a municipality seeking an outlet to the drainage system. The drainage authority must define the benefited area and benefits of the outlet, and the outlet fee. An outlet fee paid by a “drainage project” is included in the project liens on a pro rata basis based on the “drainage project” benefits. ([§ 103E.601 Drainage Lien Statement](#).) The property benefited by the outlet becomes liable for assessments and liens of the prior established drainage system after that time.

Following are summaries of steps in the processes to use these “other proceedings or procedures”.

Section 103E.401 Use of Drainage System as Outlet

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition submitted by a person, or on behalf of a “drainage project”, and coordinate with the petitioner, if necessary, for an adequate petition.
- The drainage authority in consultation with the applicable county auditor or watershed district secretary must set at time and location for a hearing and give notice by mail and by publication to all persons benefited and assessed by the system proposed to be used as an outlet.
- At the hearing, the drainage authority must consider the capacity of the established drainage system and determine whether to authorize its use as an outlet. If authorization is to be given, the drainage authority must:
 - Describe the property(ies) to be benefited by use of the established drainage system as an outlet and define the associated benefits;
 - Set the amount to be paid as an outlet fee; and
 - Set any other terms and conditions.
- If authorization is given, it must be by an order of the drainage authority.
- The property benefited by use of the established drainage system as an outlet is then liable for assessments levied by the drainage system based on the applicable drainage system cost

apportionment method, the same as for other applicable properties served by the established drainage system.

See [§ 103E.401 Use of Drainage System as Outlet, Subd. 7. Unauthorized outlet, and Subd. 8. Unauthorized outlet expenses; lien against property](#) regarding authority and procedures to address unauthorized use of an established drainage system as an outlet. See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, J. Use of the Drainage System as Outlet](#), including sample templates for a petition, hearing notice, findings and order, and notice of unauthorized outlet.

Section 103E.411 Drainage System as Outlet for Municipality

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of a petition filed by a municipality and coordinate with the petitioner, if necessary, for an adequate petition.
- A plan to connect a municipal drainage system to a proposed Chapter 103E “drainage project” or an established drainage system must be approved by the Minnesota Pollution Control Agency. Written approval should be included with the petition.
- If establishment of a “drainage project” is pending, the petition must be presented to the drainage authority at the final hearing to be considered with the Detailed Survey Report and Viewers’ Report and notice of the petition included with the final hearing notice.
- If the petition is for outlet into an established drainage system, when the petition is filed, the drainage authority in consultation with the applicable county auditor or watershed district secretary must set at time and location for a hearing and give notice by mail and by publication to all persons benefited and assessed by the drainage system proposed to be used as an outlet.
- At the hearing, the drainage authority may receive evidence from interested parties for or against granting the petition. The drainage authority must determine the benefits of using the “drainage project” or established drainage system as an outlet. The drainage authority may authorize, by order, the municipality to use the drainage system as an outlet, define conditions to protect the rights of the parties affected and safeguard the interests of the general public, and must determine an outlet charge to be paid to the drainage system account, if it determines:
 - a necessity exists for use of the Chapter 103E drainage system as an outlet for the municipal drainage system or overflow from the municipal drainage system;
 - the outlet will be of public utility and promote the public health; and
 - the proposed connection conforms to the requirements of the MPCA for construction and use of proper disposal works.
- The municipality benefited by use of an established drainage system as an outlet is then liable for assessments levied by the drainage system based on the applicable drainage system cost apportionment method, the same as for other applicable properties served by the established drainage system.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, J. Use of the Drainage System as Outlet, 2. Drainage System as Outlet for Municipality](#), including a sample template for a hearing notice.

5.11 Partial Payment of Retained Contract Amount ([§ 103E.535](#))

This provision enables a project contractor to file a petition requesting payment for 40% of the retained value of work and material, if the following criteria are met:

- 1) a single contract exceeds \$50,000;
- 2) the contract, exclusive of materials furnished and not installed, is one-half or more complete; and
- 3) the contractor is not in default.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- A contractor for an eligible contract submits a petition to the applicable county auditor or watershed district secretary requesting partial payment of 40% of the retained value of work and material.
- When the petition is filed, the auditor or secretary sets a time and location for a hearing on the petition before the drainage authority and gives notice by mail to the engineer, the attorney for the petitioners, the surety of the contractor’s performance and payment bond, and auditors of the affected counties.
- At the hearing, the drainage authority hears all parties interested. If the drainage authority determines that the facts in the petition are correct, the work has been performed in a satisfactory manner, and a portion of the retained percentage may be released without endangering the interests of those affected by the project, the drainage authority must make findings and may order not more than 40 percent of the retained value of work and material to be paid.

5.12 Apportioning Liens ([§ 103E.631](#))

A person who has an interest in property with a drainage lien attached to it can petition the drainage authority to apportion the lien among specified portions of the tract, if the payments of principal and interest on the property are not in default.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When an adequate petition is filed, the drainage authority must set a time and location, by order, for a hearing on the petition.
- At least 10 days before the hearing, the drainage authority must give notice of the hearing by personal service to the applicable county auditor(s), the occupants of the tract, and all parties having an interest in the tract as shown by records in the county recorder’s office. If personal service cannot be made to all interested persons, notice may be given by publication. The petitioner must pay the costs for service or publication.
- At the hearing, the drainage authority must hear all related evidence and, by order, apportion the lien.
- A certified copy of the order must be recorded in the county recorder's office and filed with the applicable county auditor(s).

5.13 Cost Apportionment for Joint County Drainage Systems ([§ 103E.711](#))

As the heading for Section 103E.711 indicates, it only applies to joint county drainage systems. This provision enables repair costs paid by one county for a joint county drainage system to be presented by that county’s auditor to each affected county in a repair cost statement at the end of each year or other convenient period. The repair cost statement must show the nature and cost of the repairs to the drainage system and must be based on the original apportionment of costs following the establishment

of the drainage system (or, presumably, the benefits of record, as approved by the drainage authority). If the drainage authority approves the repair costs and apportionment by county, the apportioned amounts in the statement must be paid to the county submitting the statement by the other counties.

If an affected county does not pay the applicable amount in the repair cost statement, the board of an affected county may petition the joint county drainage authority for repair cost reimbursement. As indicated in **Table 5-2**, the petition must:

- 1) show the nature and necessity of the repairs to the drainage system in the county during the applicable period;
- 2) show the cost of the repairs; and
- 3) request the drainage authority to apportion the costs, by order, among the affected counties.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When the petition is filed, the drainage authority must, by order, set a time and location for a hearing to apportion costs in the county repair cost statement.
- The applicable county auditor must give notice of the hearing to each affected county by publication and by mail to its auditor.
- At or before the hearing, the auditor of each affected county, except the petitioner, must file a statement with the drainage authority showing:
 - 1) all repairs made to the drainage system in that county, not previously reimbursed;
 - 2) the nature and necessity of the repairs; and
 - 3) the cost of the repairs.
- At the hearing, the drainage authority must hear all the interested parties and determine which repairs were necessary and reasonable and proper costs.
- For the allowed repairs, the drainage authority must balance the accounts among the affected counties by charging each county with its proportionate share of the cost of all repairs made and crediting each county with the amount paid for the repairs.
- The drainage authority shall order a just reimbursement among the affected counties. A certified copy of the order must be filed by the auditor with the auditors of affected counties, and the boards shall make the required reimbursement.

5.14 Replacement & Hydraulic Capacity of Bridges & Culverts ([§ 103E.721](#))

This section provides authorization for the drainage authority to require road authorities and owners of other bridges or culverts on a drainage system to replace bridges or culverts that provide inadequate hydraulic capacity, as defined by the engineer for a drainage system repair proceeding. Note that an engineer must be appointed for a petitioned repair, but not for a repair based on inspection.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- The engineer for a repair proceeding identifies bridges or culverts in a drainage system that provide inadequate hydraulic capacity, because of replacement, benefited property added to the drainage system under [§ 103E.741 Property not Assessed Benefits; Hearing](#), or otherwise. The engineer prepares a hydraulic capacity report, including plans, specifications and costs for the recommended replacement bridges or culverts.

- When the hydraulic capacity report is filed, the auditor notifies the drainage authority. In consultation the auditor, the drainage authority, by order, sets a time for a hearing on the report not more than 30 days after the date of the order.
- At least 10 days before the hearing, the auditor gives notice by mail of the time and location of the hearing to the petitioners, owners of property, and political subdivisions likely to be affected by the repair in the repair report. The notice may be given in conjunction with and as a part of the repair report notice, but the notice must specifically state that increasing the hydraulic capacity will be considered by the drainage authority at the hearing.
- At the hearing on the hydraulic capacity report, the drainage authority shall hear all interested parties. If the drainage authority finds that existing bridges and culverts provide insufficient hydraulic capacity for the efficient operation of the drainage system as originally constructed or subsequently improved, the drainage authority shall make findings accordingly, and may order that the hydraulic capacity be increased by constructing bridges or installing culverts of sufficient capacity. The drainage authority shall determine and include in the order the type and plans for the replacement bridges or culverts. The order must direct the state, political subdivision, railroad company, or other entity to construct bridges or culverts required by the order for its road or right-of-way within a reasonable time stated in the order.
- The auditor shall notify the state, political subdivision, railroad company, or other entity to construct the bridges and culverts in accordance with the order.
- If the work is not done within the time specified, the drainage authority may order the bridges and culverts built and the cost collected as an assessment for benefits.
- If a political subdivision, railroad company, or other entity, at the hearing or when notified to construct a bridge or install a culvert, requests that the bridge or culvert be installed as part of the repair of the drainage system, the drainage authority may, by order, direct the cost of the construction and installation be assessed and collected from the political subdivision, railroad company, or other entity in the manner provided by [§ 103E.731 Assessment; Bonds.](#)

5.15 Property Not Assessed Benefits; Hearing ([§ 103E.741](#))

Section 103E.741 provides a process for property that is benefited by a drainage system but not part of the benefited area of record to be added to the benefited area of record. This provision is used in conjunction with a repair proceeding for which an engineer is appointed and prepares a repair report. This includes a petitioned repair (§ 103E.715) and could include incremental establishment of buffer strips or side inlet controls (§ 103E.021, Subd. 6.), for which an engineer can be appointed and prepare a repair report.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- The engineer for the repair proceeding determines or is made aware of property that has been drained into the drainage system, or otherwise benefits from the drainage system, but is not included in the benefited area of record. The engineer must submit a map with the repair report showing all public and private main ditches and drains into the drainage system and all property affected or otherwise benefited by the drainage system, and identify the names of the property owners to the extent practical.
- After the repair report and map are filed, the applicable auditor or watershed district secretary must schedule and give notice by mail of the time and location for the repair report hearing to the identified property owners at least 10 days before the hearing. This is

in addition to the requirements for noticing the repair report under § 103E.715, Subd. 3 or § 103E.021, Subd. 6, paragraph (d).

- At the hearing on the repair report, if the drainage authority determines that property not assessed for benefits for the construction or repair of the drainage system has been benefited by the drainage system, the drainage authority shall appoint viewers as provided by section [103E.305](#) before the repair contract is awarded. The viewers shall determine the benefits to all property and entities benefited by the drainage system and not assessed for benefits. The viewers shall make a viewers' repair report to the drainage authority as provided by section [103E.315](#).
- When the viewers' repair report is filed, the auditor shall give notice of a hearing as required by section [103E.325](#) and the drainage authority has jurisdiction of each tract of property described in the viewers' report as provided in section [103E.331](#).
- At the hearing on the viewers' repair report, the drainage authority shall hear all interested parties and determine the benefits to property and entities benefited by the drainage system and not previously assessed for benefits. The drainage authority makes findings and orders the addition of the benefited property and benefits for the drainage system.
- Determined benefited property and benefits can be appealed within 30 days of the drainage authority order, in accordance with [§ 103E.091 Appeals](#).
- For the repair of the drainage system done in conjunction with this section, and in all future proceedings relating to repairing, cleaning, improving, or altering the drainage system, the property determined to be benefited in the viewers' repair report hearing is part of the property benefited by the drainage system and must be assessed accordingly. This requires the viewers to integrate these benefits with prior determined benefits.

5.16 Consolidating or Dividing Drainage Systems ([§ 103E.801](#))

Section 103E.801 enables several actions by the drainage authority to provide for efficient administration of Chapter 103E drainage systems, including:

- 1) divide one drainage system into two or more drainage systems;
- 2) consolidate two or more drainage systems;
- 3) transfer part of one drainage system to another;
- 4) attach property that has been removed from one drainage system as provided in [§ 103E.805 Removing Property from Drainage System](#) to another drainage system; or
- 5) attach a part of a drainage system that has been abandoned as provided in [§ 103E.811 Abandoning Drainage System](#) to another drainage system.

A proceeding can be initiated by the drainage authority on its own motion or by a petition from any party interested in or affected by the drainage system and filed with the applicable county auditor or watershed district secretary. Before the drainage authority can consolidate or divide any portion of a drainage system(s), redetermination(s) of benefits and damages must have been done to enable fair and equitable future drainage system assessments. See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.

- In response to its own resolution or an adequate petition, the drainage authority in consultation with the applicable county auditor or watershed district secretary must set a time and location for a hearing and give notice by publication to all persons interested in the drainage system(s).
- At the hearing, the drainage authority may, by order, consolidate or divide drainage systems, transfer part of one drainage system to another, or attach a previously removed or abandoned part of a drainage system to another drainage system, if it determines that the action is:
 - consistent with the redetermination of benefited areas of the drainage system(s);
 - will provide for the efficient administration of the drainage system(s); and
 - will be fair and equitable.

Properties affected by consolidation or division of drainage system(s) remain liable for drainage assessments or liens for drainage system costs existing before the drainage authority order.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, K. Consolidation or Division of Drainage Systems](#), including example templates for a petition and order.

5.17 Removing Property from a Drainage System ([§ 103E.805](#))

In accordance with § 103E.805, an owner of property within the benefited area of a drainage system may petition to have property removed from the drainage system. See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.
- In response to an adequate petition, the drainage authority in consultation with the applicable county auditor or watershed district secretary must set at time and location for a hearing and give notice by mail to the owners of all property benefited by the drainage system, and either in a newspaper of general circulation in the affected drainage area or by publication on a website of the drainage authority.
- At the hearing, the drainage authority must make findings and direct, by order, removal of the petitioner’s property from the drainage system, if it determines that:
 - the waters from the petitioner’s property have been diverted from the drainage system, or the property cannot significantly or regularly use the drainage system;
 - the property is not benefited by the drainage system; and
 - removing the property from the drainage system will not prejudice the property owners and property remaining in the drainage system.

After property is removed from the drainage system, it is no longer liable for future repairs or improvements of the drainage system but remains liable for any drainage assessments or liens for drainage system costs incurred before the removal order.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, L. Removal of Property from a Drainage System](#), including example templates for a petition, hearing notice, and order.

5.18 Partial Abandonment of Drainage System ([§ 103E.806](#))

In accordance with § 103E.806, an owner of benefited property may petition the drainage authority to abandon part of the drainage system that is not of public benefit and utility and does not serve a substantial useful purpose to property remaining in the system. See **Table 5-2** for petition requirements and **Table 5-3** for where to file the petition.

Following is a summary of steps in the process to use this “other proceeding or procedure”.

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.
- The drainage authority in consultation with the applicable county auditor or watershed district secretary must set at time and location for a hearing and give notice by mail to the owners of all property benefited by the drainage system and either in a newspaper of general circulation within the affected drainage area or by publication on a website of the drainage authority.
- At the hearing, the drainage authority must make findings and direct, by order, that part of the drainage system be abandoned, if that part of the drainage system:
 - does not serve a substantial useful purpose to any property remaining in the system; and
 - is not of a substantial public benefit and utility.

After partial abandonment, a repair petition may not be accepted for the abandoned part of the drainage system and the drainage authority responsibility for that part of the drainage system ends. An order under this section does not release the property from a drainage lien filed on account of the drainage system before the date of the order and does not release the property from any assessment or drainage lien filed on or after the date of the order for costs incurred on account of the drainage system before the date of the order.

See also [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, M. Partial Abandonment of Drainage System](#), including sample templates for a petition, hearing notice, and order.

5.19 Abandoning Drainage System ([§ 103E.811](#))

The purpose of § 103E.811 is to enable the termination of drainage authority and affected property owner responsibility to maintain a drainage system that “is not of public benefit and utility because the agricultural property that used the drainage system has been generally abandoned, or because the drainage system has ceased to function and its restoration is not practical”. These are elements of the petition requirements indicated in **Table 5-2**. ([§ 103E.811 Abandoning Drainage System., Subd. 2. Petitioners.](#))

Note that the petition must be signed by at least 51% of the property owners assessed for the drainage system, or by the owners of at least 51% of the property area assessed for the drainage system. “For the purpose of the petition, the county is the resident owner of all tax-forfeited property held by the state and assessed benefits for the drainage system, and the board may execute the petition for the county as an owner.” If the petition is signed by the board (i.e., the county is a petitioner), the petition must be made to the district court for the county and filed with the court administrator, as also indicated in **Table 5-2**. ([§ 103E.811 Abandoning Drainage System., Subd. 3. Petition. and Subd. 4. Filing petition; jurisdiction.](#))

This proceeding can only be used after expiration of the period originally fixed or subsequently extended to pay the assessments of drainage system liens. ([§ 103E.811 Abandoning Drainage System, Subdivision 1. Drainage lien payment period must expire.](#))

Following is a summary of subsequent steps in the process to use this “other proceeding or procedure”.

- When a petition is properly filed, the drainage authority in consultation with the applicable county auditor or watershed district secretary, or the court administrator with the approval of the court, must set a time and location for a hearing on the petition and give notice by publication of the time and location of the abandonment hearing to all persons interested.
- At the hearing, the drainage authority or court examines the petition to determine whether it is sufficient and hears any testimony from all interested parties.
- If a property owner assessed benefits for the drainage system appears at the hearing and makes a written objection to the abandonment of the drainage system, the drainage authority or court must appoint three viewers to examine the property and report to the drainage authority or court. The hearing must be adjourned to make the examination and report and a date set to reconvene. The viewers, if appointed, must proceed to examine the property of the objecting owner and report as soon as possible to the drainage authority or court with the description and situation of the property and whether the drainage system drains or otherwise affects the property.
- When the hearing is reconvened, the drainage authority or court must consider the viewers’ report and all evidence offered.
- If the drainage authority determines that the drainage system serves any useful purpose to any property or the general public, the petition for abandonment must be denied; or
- If the drainage authority determines that the drainage system does not serve any useful purpose to any affected property and is not of public benefit and utility, the drainage authority or court must make findings and must, by order, abandon the drainage system.

After abandonment of a drainage system, a repair petition for the drainage system cannot be accepted and the responsibility of the drainage authority for maintenance of the drainage system ends.

There are several typical challenges associated with use of this proceeding, including:

- 1) The records for a drainage system that likely has not been maintained for many decades may not be adequate to define the benefited and assessed properties of record.
- 2) Such a drainage system likely has no repair funds or other funds in a drainage system account, while the costs of the proceeding, including a potential need to appoint viewers, can be significant and, therefore, difficult to fund.
- 3) The written objection of only one assessed property owner and the test that “the drainage system does not serve any useful purpose to any affected property” are high bars. However, the Minnesota Supreme Court has held that the reading of this provision cannot be literal, and the drainage authority may exercise some discretion in abandoning a drainage system that is no longer practical to restore, despite serving some useful purpose. See [MPDM Chapter 2. Administrative and Legal Issues, Section III. Types of Proceedings, N. Abandonment of Drainage System](#) and footnotes.

It is recommended that an attorney with applicable experience, and applicable case law, be consulted.

5.20 Transfer of Authority for a Drainage System ([§ 103E.812](#), [§ 103D.625](#))

Drainage System Transfer in Accordance with Chapter 103E

[Section 103E.812 Transfer of All or Part of Drainage System](#) enables transfer of jurisdiction for all or part of a Chapter 103E drainage system from the current drainage authority to a different water management authority. This can be advantageous in several circumstances, the most common of which is when urban development has expanded over or around all or part of the watershed and right-of-way of a Chapter 103E drainage system, which has effectively become part of a city's stormwater management system. Another example is where a more specific water management organization or authority has become established for a watershed or subwatershed. A water management authority is defined in Chapter 103E as a county or municipality, a watershed district, a watershed management organization, a stormwater management district, a lake improvement district, a subordinate service district, a joint powers organization, or other special district organized and formed according to law for the purpose of managing storm, surface, and floodwaters, or with the authority to manage storm, surface, and floodwater. ([§ 103E.005 Definitions, Subd. 29. Water management authority.](#))

This proceeding can only be used after expiration of the period originally fixed or subsequently extended to pay the assessments of drainage system liens. **Table 5-2** defines eligible petitioners and other petition requirements. For the purpose of the petition, the county is the resident owner of all tax-forfeited property under [Chapter 282. Tax-Forfeited Land Sales](#), and is assessed applicable benefits for the drainage system. The county board may execute the petition for the county as an owner. This does not apply to lands acquired by the state under [Chapter 84A. Lands Dedicated for Conservation](#). **Table 5-3** indicates where the petition must be filed.

All costs, including engineering and attorney's fees for this proceeding must be paid by the proposed transferee water management authority, unless the drainage authority or court do not order the transfer, in which case the drainage system account must reimburse the water management authority for reasonable value of engineering work conducted.

Following is a summary of subsequent steps in the process to use this "other proceeding or procedure".

- When a petition is properly filed, the drainage authority and its attorney determine the adequacy of the petition and coordinate with the petitioner, if necessary, for an adequate petition.
- When the petition is filed, the drainage authority in consultation with the applicable county auditor or watershed district secretary, or the court administrator with the approval of the court, must set a time and location for a hearing on the petition and must give notice by mail and publication of the time and location of the transfer hearing to all persons interested.
- At the hearing, the drainage authority or court examine the petition for sufficiency and hear all interested parties.
- If a property owner assessed benefits for the drainage system appears at the hearing and makes a written objection to the transfer of the drainage system, the drainage authority or court must appoint a technical panel to examine the drainage system, the property, and the proposed transfer and report to the drainage authority or court. The hearing must be adjourned to make the examination and report and a date must be set to reconvene.
- The technical panel shall consist, at a minimum, of a representative of the drainage authority, a representative of the DNR commissioner, a representative of the soil and water conservation district, a representative of the Board of Water and Soil Resources, and a viewer. The technical panel shall proceed to examine the drainage system, the property, and the property owner's

objections to the proposed transfer of the system and report as soon as possible to the drainage authority or court with the merits of the objections. The technical panel shall also determine the extent to which the transfer of the drainage system will damage or take property. Nongovernment employee members of the technical panel must be compensated in the same manner as viewers under [§ 103E.645 Allowance and Payment of Fees and Expenses., Subd. 3. Viewers.](#)

- The Board of Water and Soil Resources and the DNR commissioner, if requested by the drainage authority or court, shall provide any technical assistance, including engineering, surveys, hydrologic analyses, or water quality studies as requested by the drainage authority or court.
- When the hearing is reconvened, the drainage authority or court shall consider the technical panel's report and all evidence offered. If the drainage authority or court determines that storm, surface, or floodwaters along the drainage system or within the benefited area of the drainage system could be better managed by a water management authority, it shall authorize the transfer of the drainage system. This must be done by order, or the petition must be denied by order.

This proceeding must guarantee that all rights to an outlet of at least equal hydraulic efficiency are preserved for property assessed for benefits on the transferred drainage system equivalent to the rights to an outlet that existed on the date of transfer. The transfer of all or part of a drainage system to a water management authority is not a compromise of any property right held by an owner of assessed property on the transferred drainage system. A water management authority shall compensate any owner of property assessed for benefits on the transferred drainage system for the loss or impairment of any drainage rights occurring after transfer of all or part of the drainage system.

Except as provided in § 103E.812, after transfer of all or part of a drainage system to a water management authority, the drainage system ceases to be subject to regulation under Chapter 103E except that if only a portion of a drainage system is transferred, the water management authority may be assessed for improvements under [§ 103E.215](#) or repairs under sections [§ 103E.701](#) to [§ 103E.711](#) in the manner provided under [§ 103E.315](#) and [§ 103E.601](#) to [§ 103E.615](#). The water management authority may manage water within its jurisdictional boundaries according to whatever law controls the function of the water management authority. The transferred drainage system shall become a work and a responsibility of the transferee water management authority. All responsibility of the drainage authority for the transferred drainage system ends.

Activities conducted in the transferred drainage system must continue to be eligible for all exemptions and exceptions available for activities conducted in public drainage systems under sections [§ 103G.2241](#) and [§ 103G.245](#).

This section does not amend, supersede, or repeal any existing law providing for the transfer of a drainage system under this chapter, chapter 103D, or other law, but is supplementary to those laws.

Transfer to a Watershed District in Accordance with Chapter 103D

Transfer of a Chapter 103E drainage system from a county or joint county drainage authority to watershed district drainage authority can also occur under [Chapter 103D. Watershed Districts](#), in accordance with [§ 103D.625 Drainage Systems in Watershed District.](#)

- The transfer may be initiated by a county or joint county drainage authority directive, a petition from an interested person, or a resolution by the watershed district. ([§ 103D.625, Subdivision 1. Duty to assume drainage systems., paragraph \(a\)](#))
- The county or joint county drainage authority must hold a hearing on the transfer after giving 2 weeks' notice in a legal newspaper of general circulation in the area where the transfer is to occur.

All interested persons may appear and be heard. ([§ 103D.625, Subdivision 1. Duty to assume drainage systems., paragraph \(b\)](#))

- After the hearing, the joint county drainage authority or county board shall order the watershed district to take over the joint county or county drainage system, unless it appears that the takeover would not serve the purpose of Chapter 103D and would not be for the public welfare or be in the public interest. ([§ 103D.625, Subdivision 1. Duty to assume drainage systems., paragraph \(c\)](#))

A joint county or county drainage system that is taken over in whole or in part becomes part of the works of the watershed district to the extent taken over. ([§ 103D.625, Subdivision 2. Status of assumed drainage systems.](#))

After the transfer is ordered, all proceedings for repair and maintenance must conform to Chapter 103E, except for repairs and maintenance done pursuant to section [§ 103D.621 Drainage Improvements, Subd. 4. Alternative power.](#) ([§ 103D.625, Subdivision 3. Procedure for repair or improvement.](#))

Construction of new drainage systems or improvements of existing drainage systems in the watershed district must be initiated by filing a petition with the managers. The proceedings for the construction or improvement of drainage systems in the watershed district must conform to Chapter 103E, except for repairs and maintenance done pursuant to section [§ 103D.621, Subd. 4.](#) ([§ 103D.625 Drainage Systems in Watershed District., Subd. 4. Construction or improvement.](#)) This is relatively common way for Chapter 103E drainage authority to be initiated with, or transferred to, a watershed district.

Section 6. VIEWING

The process of “viewing” determines the properties benefited by a drainage project, a drainage system, or certain repair activities, as well as the associated monetary benefits and damages for separate properties, in accordance with [§ 103E.315 Assessing Drainage Benefits and Damages.](#) Benefits are used in the benefit-cost test required for a proposed “drainage project” and as a basis for pro rata apportionment of drainage project costs assessed to the benefited properties. Benefits of record can also be used as a basis for “repair” cost apportionment and are used as a basis to apportion costs for most “other proceedings”. Damages are the costs of a drainage system paid to the affected property owners for land rights acquisition, including permanent and temporary right-of-way, diminished land value, or damage to a conservation program practice cause by a “drainage project” or repair.

6.1 Proceedings or Procedures Requiring Viewers

There are nine types of drainage proceedings or procedures that require the appointment of viewers to determine benefits and/or damages:

Drainage Projects

- 1) [§ 103E.212 New Drainage System Projects.](#)
- 2) [§ 103E.215 Improving Drainage Systems.](#)
- 3) [§ 103E.221 Improving Outlets.](#)
- 4) [§ 103E.225 Laterals.](#)

Specific Repairs and Other Proceedings or Procedures

- 5) [§ 103E.715 Repair by Petition., Subd. 6. Repair by resloping ditches, incorporating multistage ditch cross-section, leveling spoil banks, installing erosion control, or removing trees.](#) (if the repair involves new benefits and/or damages)
- 6) [§ 103E.351 Redetermining Benefits and Damages.](#)
- 7) [§ 103E.741 Property not Assessed Benefits.; Hearing.](#) (For property found by the engineer in a repair proceeding or procedure to be receiving benefits but not previously assessed benefits.)
- 8) [§ 103E.811 Abandoning Drainage System.](#) (If necessary. See process in **Section 5**.)
- 9) [§ 103E.812 Transfer of All or Part of Drainage System.](#) (If necessary. See process in **Section 5**.)

6.2 Proceedings or Procedures Not Requiring Viewers

There are three proceedings or procedures in Chapter 103E for which the drainage authority may determine damages or benefits on its own, without appointing viewers:

- For damage determinations in accordance with [§ 103E.021 Planting Ditches with Perennial Vegetation., Subd. 6. Incremental establishment; vegetated buffer strips and side inlet controls., paragraph \(c\)](#), if the drainage authority so chooses.
- For an outlet petition in accordance with [§ 103E.401 Use of Drainage System as Outlet.](#)
- For an outlet petition in accordance with [§ 103E.411 Drainage System as Outlet for Municipality.](#)

However, viewers may be appointed to determine damages for buffer strips or side inlet controls in accordance with § 103E.021, Subd. 6. When a “drainage project” seeks an outlet into an established drainage system in accordance with [§ 103E.401 Use of Drainage System as Outlet, Subd. 6. Paying outlet fee](#), the outlet fee is a cost (damage) of the “drainage project”. The viewers for the “drainage project” can help the drainage authority of the established drainage system determine the benefits of the outlet and the outlet fee.

See [MPDM Chapter 4. Viewing and Appraising, Section II. Procedures Requiring Viewing](#) for additional information and guidance.

6.3 Appointment and Qualifications of Viewers

In accordance with [§ 103E.305 Viewers’ Appointment and Qualification](#), viewers are “disinterested residents of the state qualified to assess benefits and damages. The drainage authority may establish qualifications for viewers.” Three viewers are required to be appointed as a team, except for § 103E.812, which only requires one viewer to serve on a technical panel, if necessary.

Because viewers play a crucial role in a “drainage project” or other proceeding for which they are appointed, drainage authorities should exercise care in appointing qualified and articulate viewers. The types of knowledge and experience needed by viewers includes:

- soils maps and data, including the USDA Web Soil Survey
- agriculture and productivity of land
- land values and effects of drainage on land values
- availability and interpretation of pertinent aerial photography
- topography and runoff
- engineering and survey data related to the effects of surface and subsurface drainage systems

- the value of land rights acquired or otherwise diminished by a drainage system or associated work
- property parcel, tract and government lot boundaries and ownership
- geographic information systems (GIS) and other pertinent data management tools
- mass appraisal methods

Viewers should be able to present their analyses and determinations in an orderly and understandable manner at hearings. Lead viewers may also be required to testify in court regarding an appeal of benefits and/or damages.

Compensation for viewers is established by the drainage authority and is paid on a per diem basis and for actual and necessary expenses. ([§103E.645 Allowance and Payment of Fees and Expenses., Subd. 3. Viewers.](#))

See [MPDM Chapter 4. Viewing and Appraising, Section III. Appointment of Viewers](#) for additional information and guidance.

6.4 Determination of Drainage Benefits and Damages

In accordance with [§ 103E.315 Assessing Drainage Benefits and Damages, Subdivision. 1. State land; Subd. 2. Government property; Subd. 3. Public roads; and Subd. 4. Railway and other utilities](#), these special types of property are subject to benefits and damages determination on the same basis as private lands, with a few qualifications defined in those subdivisions.

Drainage Benefits

“[Section 103E.315 Assessing Drainage Benefits and Damages., Subd. 5. Extent and basis of benefits.](#) (a) The viewers shall determine the amount of benefits to all property within the watershed, whether the property is benefited immediately by the construction of the proposed drainage project or the proposed drainage project can become an outlet for drainage, makes an outlet more accessible, or otherwise directly benefits the property. The benefits may be based on:

- (1) an increase in the current market value of property as a result of constructing the project;
- (2) an increase in the potential for agricultural production as a result of constructing the project; or
- (3) an increased value of the property as a result of a potential different land use.

(b) Benefits and damages may be assessed only against the property benefited or damaged or an easement interest in property for the exclusive use of the surface of the property.”

[Section 103E.315 Assessing Drainage Benefits and Damages, Subd. 6. Benefits for proposed drainage project as outlet](#) addresses the situation when a proposed drainage project serves as the outlet for an existing drainage system. It enables the viewers to determine an outlet benefit of the proposed drainage project to the existing drainage system for each tract or lot drained by the existing drainage system, as a single amount, or on a watershed acre basis.

This subdivision also enables the viewers to assess outlet benefits to property within the watershed of a project area that is responsible for increased sedimentation downstream, and to property responsible for increased drainage system maintenance or capacity because the natural drainage on the property has been altered to accelerate the drainage of water from the property (aka “accelerated runoff”).

[Section 103E.315 Assessing Drainage Benefits and Damages, Subd. 7. Benefits for project that increases drainage capacity](#) addresses the situation when part of the drainage project for which the viewers are determining benefits increases drainage capacity that is necessary due to increased

drainage in the drainage project watershed rather than increased drainage in a specific area of the project watershed. In this case, the viewers may assess benefits on property in the project watershed on a pro rata basis, such as for relative contribution of runoff to the drainage project.

See [MPDM Chapter 4. Viewing and Appraising, Section IV. Assessment of Drainage Benefits](#) and its subsections for additional information and guidance regarding:

- Federal or Tribal Lands ([Chapter 4, Section IV, A.1.](#))
- State Lands or Water Areas Used for Conservation ([Chapter 4, Section IV, A.2.](#))
- Other State Lands ([Chapter 4, Section IV, A.3.](#))
- Consolidated Conservation Lands ([Chapter 4, Section IV, A.4.](#))
- Municipalities ([Chapter 4, Section IV, A.5.](#))
- Water Management Authority ([Chapter 4, Section IV, A.6.](#))
- Public Roads ([Chapter 4, Section IV, A.7.](#));
- Railways and Other Utilities ([Chapter 4, Section IV, A.8.](#))
- Market-Value Based Benefits ([Chapter 4, Section IV, B.](#))
- Charge-Based Benefits ([Chapter 4, Section IV, C.](#))
- Protection Benefits ([Chapter 4, Section IV, D.](#))
- Improvement of an Outlet Benefits ([Chapter 4, Section IV, E.1.](#))

Damages of a Drainage Project or Repair

Section 103E.315 defines the basis for a drainage system to pay damages to the affected property owner(s), as follows.

“[Section 103E.315 Assessing Drainage Benefits and Damages., Subd. 8. Extent of damages.](#) (a) Damages to be paid may include:

- (1) the fair market value of the property required for the channel of an open ditch and the permanent strip of perennial vegetation under section [103E.021](#);
- (2) the diminished value of a farm due to severing a field by an open ditch;
- (3) loss of crop production during drainage project construction;
- (4) the diminished productivity or land value from increased overflow; and
- (5) costs to restore a perennial vegetative cover or structural practice existing under a federal or state conservation program adjacent to the permanent drainage system right-of-way and damaged by the drainage project.

(b) When damages are determined to acquire or otherwise provide compensation for buffer strips or alternative riparian water quality practices previously installed as required by section [103F.48, subdivision 3](#), the viewers and drainage authority shall consider the land use prior to buffer strip or alternative practice installation in determining the fair market value of the property under paragraph (a), clause (1).”

Paragraph (b) was revised in 2016, based on recommendations of the stakeholder Drainage Work Group. The purpose is to clarify determination of damages for ditch buffer strips required by [§ 103E.021 Planting Ditches with Perennial Vegetation, Subdivision 1. Requirements; spoil banks and permanent vegetation](#) when buffer strips or alternative riparian water quality practices have previously been installed as required by [§ 103F.48 Riparian Protection and Water Quality Practices., Subd. 3. Riparian](#)

[protection; requirements on public waters and public drainage systems.](#) (i.e., the “Buffer Law”). The clarifications enable the viewers and drainage authority to consider and compensate property owners for ditch buffer strip right-of-way acquisition after the buffer law the same as before the buffer law requirement, as appropriate.

See [MPDM Chapter 4. Viewing and Appraising, Section V. Extent of Damages](#) for additional information and guidance, including the following subsections.

- A. Easements and Rights-of-Way
- B. Temporary Construction Easements
- C. Damages for Repairs by Resloping, Incorporating a Multi-Stage Cross-Section, Leveling Spoil Banks, Installing Erosion Control, or Removing Trees

6.5 Viewers’ Report and Property Owners’ Report

Viewers’ Report

The Viewers’ Report documents the facts and determinations of the team of viewers regarding: the benefited properties, as well as the monetary benefits and damages of a proposed drainage project, existing drainage system (when redetermining benefits and damages), or for another applicable proceeding or procedure. It also provides the information necessary to develop the Property Owners’ Report, which is prepared by the applicable county auditor or watershed district secretary for the drainage authority and affected property owners. The Viewers’ Report is a very important document, because the report and the benefits determined are used:

- In a “drainage project” proceeding to define benefits for the required benefit-cost test and as a basis for pro rata assessment of drainage project costs to benefited property owners
- As a method based on the benefits of record for pro rata apportionment of “repair” costs under [§ 103E.728 Apportioning Repair Costs.](#)
- In applicable “other proceedings or procedures” for pro rata apportionment of proceeding costs based on the benefits of record

Damages determined in the Viewers’ Report are reflected in the Property Owners’ Report to define the net amount assessed or paid to benefited or otherwise affected property owners.

Following are the provisions of [§ 103E.321 Viewer’s Report](#), with an added *clarification* in Subd. 4.

“Subdivision 1. **Requirements.** The viewers' report must show, in tabular form, for each lot, 40-acre tract, and fraction of a lot or tract under separate ownership that is benefited or damaged:

- (1) a description of the lot or tract, under separate ownership, that is benefited or damaged;
- (2) the names of the owners as they appear on the current tax records of the county and their addresses;
- (3) the number of acres in each tract or lot;
- (4) the number and value of acres added to a tract or lot by the proposed drainage of public waters;
- (5) the damage, if any, to riparian rights;
- (6) the damages paid for the permanent strip of perennial vegetation under section [103E.021](#);
- (7) the total number and value of acres added to a tract or lot by the proposed drainage of public waters, wetlands, and other areas not currently being cultivated;
- (8) the number of acres and amount of benefits being assessed for drainage of areas which before the drainage benefits could be realized would require a public-waters-work permit to work in

public waters under section [103G.245](#) to excavate or fill a navigable water body under United States Code, title 33, section 403, or a permit to discharge into waters of the United States under United States Code, title 33, section 1344;

- (9) the number of acres and amount of benefits being assessed for drainage of areas that would be considered conversion of a wetland under United States Code, title 16, section 3821, if the area was placed in agricultural production;
- (10) the amount of right-of-way acreage required; and
- (11) the amount that each tract or lot will be benefited or damaged.

Subd. 2. **Benefits and damages statement.** (a) The viewers' report must include a benefits and damages statement that shows for each property owner how the benefits or damages for similar tracts or lots were determined. For similar tracts or lots the report must describe:

- (1) the existing land use, property value, and economic productivity;
- (2) the potential land use, property value, and economic productivity after the drainage project is constructed; and
- (3) the benefits or damages from the proposed drainage project.

(b) The soil and water conservation districts and county assessors shall cooperate with viewers to provide information required under paragraph (a).

Subd. 3. **Disagreement of viewers.** If the viewers are unable to agree, each viewer shall separately state findings on the disputed issue. A majority of the viewers may perform the required duties under this chapter.

Subd. 4. **Filing.** When the viewers complete their duties, they shall file the viewers' report with the auditor of each affected county [*clarification: or the secretary or a watershed district drainage authority*]. A detailed statement must be filed with the viewers' report showing the actual time the viewers were engaged and the costs incurred. The viewers shall perform their duties and complete the viewers' report as soon as possible after their first meeting."

Property Owners' Report

A Property Owners' Report is prepared by the applicable county auditor or watershed district secretary within 30 days after the Viewers' Report has been filed. Viewers often assist the auditor or secretary in completing this report. The property owners report contains the information in the viewers' report specific to each property owner benefited or damaged by the proposed drainage project or repair project, as applicable. A detailed description of the requirements for this report and filing are provided in **Section 3. DRAINAGE PROJECTS, subsection 3.17 Property Owners' Report** of this Handbook.

See also [MPDM Chapter 4. Viewing and Appraising, Section VI. Viewers' Report / Property Owners' Report](#) and associated subsections, including a sample template for a Viewers' Report (**Template A.**) and for a Property Owners' Report (**Template B.**).

[MPDM Chapter 4. Viewing and Appraising, Section VII. Maintaining Benefits Records](#) includes the following subsections for additional information and guidance.

- A. **Recording of Benefits**
- B. **Recording of Drainage System Order and the Marketable Title Act** (including a **Recommended Checklist for Recording Drainage System Right-of-Way**)
- C. **Allocation of Benefits for Parcel Splits and Transfers**

Section 7. APPEALS

The roles and responsibilities of the drainage authority under Chapter 103E are administrative. The drainage authority receives reports and other evidence; considers evidence, including applicable laws and rules; draws conclusions; and makes orders in a manner that is quasi-judicial and binding, similar to the judicial roles of courts. Typically, judicial review of quasi-judicial decisions made by an administrative body like a drainage authority is invoked by petitioning to the court of appeals for a writ of certiorari (a request to review). However, Chapter 103E provides for appeal to the applicable district court from a final drainage authority order, in accordance with [§ 103E.091 Appeals](#) and [§ 103E.095 Appeal from Orders Dismissing or Establishing Drainage Systems](#), which are copied below.

- The text of these sections of Chapter 103E begin with “A party may appeal”. A party with standing to appeal is a person or entity affected by the drainage authority order.
- An appeal must be properly filed within 30 days after the associated drainage authority order.
- Section 103E.091 specifies a trial by jury in the applicable district court, while § 103E.095 specifies a trial by the applicable district court without a jury.

[MPDM Chapter 2. Administrative and Legal Issues, Section VII. Appeals and Other Litigation](#) includes the following subsections, with substantial discussion and guidance.

- A. Drainage Code Appeals, 1. Establishment Appeal (Minn. Stat. § 103E.095), 2. Benefits and Damages Appeal (Minn. Stat. § 103E.091)**
- B. Tax Assessment Appeals**
- C. Extraordinary Remedies**

7.1 Appeals of Benefits, Damages, Fees, or §103E.015 Compliance

“[§ 103E.091 Appeals., Subdivision 1. Grounds for appeal.](#) A party may appeal to the district court from a recorded order of a drainage authority made in a drainage proceeding that determines:

- (1) the amount of benefits;
- (2) the amount of damages;
- (3) fees or expenses allowed; or
- (4) whether the environmental, land use, and multipurpose water management requirements and criteria of section [103E.015, subdivision 1](#), are met.

Subd. 2. Appeals; benefits and damages. (a) A person who appeals the amount of benefits or damages may include benefits and damages affecting property not owned by the appellant. Notice of the appeal must be served to the auditor and to the owner or occupant of property included in the appeal or to the attorney representing the property owner in the proceedings.

(b) The appellant must file a notice of appeal with the auditor within 30 days after the order to be appealed is filed. The notice must state the specific benefits or damages appealed and the basis for the appeal. Within 30 days after the notice is filed, the auditor must file the original notice with the court administrator of the district court.

Subd. 3. Appeals; allowing fees or expenses. An appeal related to the allowance of fees or expenses may be to the district court of any county where the affected property is located. The appeal must be made within 30 days after the order allowing or disallowing the claim and is governed as applicable by the provisions of subdivision 4.

Subd. 4. **Appeal trial.** (a) The issues in the appeal are entitled to a trial by a jury in the district court of the county where the drainage proceeding was pending.

(b) At the request of the appellant, the trial must be held at the district court of the county where the affected property is located. The court administrator of the district court where the appeal is first filed shall make, certify, and file with the court administrator of the district court of the county where the trial is transferred, a transcript of the papers and documents on file in the court administrator's office in the proceedings related to the matters of the appeal. After the final determination of the appeal, the court administrator of the district court that tried the appeal shall certify and return the verdict to the district court of the county where the drainage proceedings were filed.

(c) The appeal shall take precedence over all other civil court matters. If there is more than one appeal to be tried in one county, the court may, on its own motion or the motion of an interested party, consolidate two or more appeals and try them together, but the rights of the appellants must be determined separately. If the appellant does not prevail, the cost of the trial must be paid by the appellant.

(d) The court administrator of the district court where the appeal is filed shall file a certified copy of the final determination of the appeal with the auditor of the affected counties.

Subd. 5. **Effect of determination.** For all appeals, the amount awarded by the jury as a determination of the issue appealed shall replace the amount that was appealed.”

7.2 Appeal from Orders Dismissing or Establishing Drainage Systems

“[§ 103E.095 Appeal from Orders Dismissing or Establishing Drainage Systems., Subdivision 1. Notice of appeal.](#) A party may appeal an order made by the board that dismisses drainage proceedings or establishes or refuses to establish a drainage project to the district court of the county where the drainage proceedings are pending. The appellant must serve notice of the appeal to the auditor within 30 days after the order is filed. After notice of the appeal is served, the appeal may be brought to trial by the appellant or the drainage authority after notifying the other party at least ten days before the trial date.

Subd. 2. **Trial.** The appeal must be tried by the court without a jury. The court shall examine the entire drainage proceeding and related matters and receive evidence to determine whether the findings made by the board can be sustained. At the trial the findings made by the board are prima facie evidence of the matters stated in the findings, and the board's order is prima facie reasonable. If the court finds that the order appealed is lawful and reasonable, it shall be affirmed. If the court finds that the order appealed is arbitrary, unlawful, or not supported by the evidence, it shall make an order, justified by the court record, to take the place of the appealed order, or remand the order to the board for further proceedings. After the appeal has been determined by the court, the board shall proceed in conformity with the court order.

Subd. 3. **Multiple appeals; order of determination.** If the order establishing a drainage project is appealed, the trial of appeals related to benefits or damages in the drainage proceeding must be stayed until the establishment appeal is determined. If the order establishing the drainage project is affirmed, appeals related to benefits and damages must then be tried.

Subd. 4. **Appeal order establishing drainage project; notice.** If an order refusing to establish a drainage project is appealed, and the court, by order, establishes the drainage project, the auditor shall give notice by publication of the filed order. The notice is sufficient if it refers to the drainage project or system by number or other descriptive designation, states the meaning of the order, and states the date the court order was filed. A person may appeal the establishment order to the district court as provided in this section.

Subd. 5. **Appeal of appellate order.** A party aggrieved by a final order or judgment rendered on appeal to the district court may appeal as in other civil cases. The appeal must be made and perfected within 30 days after the filing of the order or entry of judgment.”

Note: This section of Chapter 103E is also specified for an appeal of a repair cost apportionment under [§ 103E.729 Apportioning Repair Costs; Alternative Option., Subd. 7. Appeals.](#)

Section 8. BEST MANAGEMENT PRACTICES

A Best Management Practice (BMP) in the context of Chapter 103E drainage systems is a structural or non-structural practice that helps achieve multipurpose water management (including drainage). This includes Chapter 103E public drainage systems and the contributing watershed of a drainage system. See the following text box for a key element of the definition and understanding of “multipurpose water management” in Chapter 103E. Note that providing adequate drainage system capacity is one of the multiple purposes.

Multipurpose Water Management

Multipurpose water management, as included in § 103E.015, Subdivision 1., clause (2) and discussed in this Handbook, refers to management of drainage systems to:

- (i) conserve and use drainage waters for agriculture, stream flow augmentation, or other beneficial uses;
- (ii) reduce downstream peak flows and flooding;
- (iii) provide adequate drainage system capacity;
- (iv) reduce erosion and sedimentation; and
- (v) protect or improve water quality.

The § 103E.015, Subdivision 1 considerations criteria are not required for “repairs” but provide multipurpose context for all drainage system BMPs for “drainage projects” and “repairs”.

The use of BMPs for erosion control is common practice for drainage system design and maintenance / repair, including ditch profile and cross-section design for stability, ditch grade control structures where necessary, vegetation establishment on ditch side slopes, side inlet erosion control, erosion control at culverts and bridges, tile outlet erosion control, and vegetated ditch buffer strips. However, opportunities exist for more comprehensive use of other types of BMPs to enhance multipurpose drainage management. Because Chapter 103E drainage law and systems have a focus on drainage, the economic feasibility of some of these multipurpose BMPs can be dependent on achieving multiple purposes and benefits funded in part by external sources.

An important aspect of multipurpose BMPs for drainage systems is to protect drainage and other infrastructure, and to reduce drainage system maintenance costs.

8.1 Types of BMPs

Drainage system BMPs can be categorized into two types: on-system and off-system. For this Handbook, BMPs located in, along or adjacent to a drainage system are considered “on-system”, while BMPs located on other property within the watershed of the drainage system are considered “off-system”. It’s important for both the drainage inspector and the drainage engineer to become familiar with the

potential for on-system and off-system BMPs to help solve or avoid on-system hydraulic capacity and maintenance problems and help to achieve multipurpose water management.

On-System BMPs

This type of BMP located in, along, or adjacent to a drainage system benefited the drainage system and other water management purposes by improving open ditch stability, reducing erosion and sedimentation, reducing peak flows and downstream flooding, protecting or improving water quality, and protecting or improving aquatic or terrestrial habitat. The drainage engineer typically designs drainage systems with the following objectives and on-system BMPs, including:

- ditch alignment, profile and cross-section design for stability;
- ditch grade control structures where necessary to maintain a stable ditch bottom, dissipate energy of flow and protect ditch side slopes;
- erosion control at culverts, bridges, the outside of sharp bends in ditch alignment, outlets of side inlets, and at tile inlets and outlets; and
- construction erosion control, including construction stormwater pollution prevention practices, timing and sequence of construction, and rapid establishment of effective, permanent vegetation for erosion control.

Public drainage ditch buffer strips of perennial vegetation are required by Chapter 103E when viewers are appointed and required of property owners by [§ 103F.48 Riparian Protection and Water Quality Practices](#) (MN Buffer Law). Ditch buffer strips provide a tillage, fertilizer and pesticide setback from an open ditch; trap waterborne and windborne sediment that may pass over the buffer strip; protect water quality; and provide access for ditch inspection and maintenance.

Additional on-system BMPs include:

- **Enhanced side inlet controls**, particularly when designed for short-term detention to prevent erosion, meter runoff into the ditch, and trap sediment on a field adjacent to the ditch at relatively low cost.
- **Alternative tile inlets**, such as perforated risers and many other types of commercial inlets, as well as gravel inlets, that meter flow and reduce sediment and crop residue from entering the tile.
- **Restored, or constructed wetland** on-system that can temporarily detain runoff, reduce downstream peak flows and demand on the drainage system hydraulic capacity, improve water quality (primarily via denitrification) and provide aquatic and terrestrial wildlife habitat. This BMP is typically sited where a wetland had been drained but not sufficiently for productive farming.
- **Culvert sizing** can utilize very short-term (e.g., 24 to 36 hours) detention storage upstream from ditch crossings. This practice can reduce or avoid flooding of downstream properties and road crossings by drainage from upstream properties and, thereby, help balance the benefits and risks of the drainage system amongst all affected properties. Because most agricultural crops are not harmed by shallow inundation for 24 to 48 hours, culvert-sizing at ditch crossings utilizes an opportunity to reduce peak flows that often exists for drainage ditch systems. This BMP typically works best for smaller drainage areas that have intermittent flow, such as in the headwaters areas of drainage systems. Proper consideration must be given to road category and risks of overtopping, erosion control, and the need for fish passage where there is perennial flow.
- **Two-stage ditch** cross section is an important BMP where a ditch is a channelized alluvial stream or ditch with perennial flow and a substantial sediment load. In these situations, the

ditch may have formed a 2-stage channel with substantial aquatic habitat. Another application is for a ditch with unstable side slopes due to seepage and/or soil with low shear strength. A two-stage ditch can help stabilize a ditch and significantly reduce future maintenance. It can be designed to provide the same hydraulic capacity as a single stage trapezoidal ditch, while protecting or improving aquatic habitat and water quality.

- **Saturated buffers** along a drainage ditch using controlled subsurface drainage can improve water quality primarily by reducing nitrates of subsurface tile drainage into an open ditch.
- **Bioreactors** are used primarily on tile drainage systems to reduce nitrates in tile outflows, although multi-nutrient reduction bioreactors are being researched and demonstrated on tiles and ditches.

Off-System BMPs

These include practices located within the watershed of a drainage system that benefit the drainage system and other water management purposes in similar ways as on-system BMPs. Reduction of hydraulic capacity demand on a drainage system and reduced sediment clean-out needs of a drainage ditch are key purposes and benefits for a drainage system. Examples include:

- **Grassed waterway** in fields to prevent gully erosion and trap sediment.
- **Water and sediment control basin, or grade stabilization structure** to intercept concentrated runoff slope length, trap sediment, temporarily detain and meter runoff, and prevent gully erosion and subsequent sediment delivery to a drainage system.
- **Restored, or constructed wetland** in the watershed of a drainage system for the same purposes as on-system restored or constructed wetlands.
- **Conservation tillage, no-till and/or cover crops** to increase infiltration, soil organic matter and soil profile water holding capacity, increase evapotranspiration, reduce and slow runoff, and reduce erosion and sediment delivery to a drainage system.

8.2 Comprehensive Local Water Planning and Implementation

Minnesota's comprehensive local water planning and implementation framework, including One Watershed, One Plan, is about multipurpose water management. This involves multipurpose drainage management where there are Chapter 103E and private drainage systems. This planning and implementation framework includes coordination of public and private water management purposes, as well as state and federal funding for eligible conservation practices that are compatible with multipurpose drainage management. Watershed-based funding for implementation enhances the opportunities to more efficiently coordinate public programs and Chapter 103E drainage system funds for multipurpose drainage projects and repairs. However, note that public conservation and water quality programs are focused on purposes and benefits other than the drainage purpose and benefits.

8.3 Applicable Multipurpose Provisions in Chapter 103E

- [§ 103E.011, Subd. 5. Use of external sources of funding.](#)
Enables use of external funding for water quality improvements, wetland restoration or protection, or flood control purposes.
- [§ 103E.015 Considerations before drainage work is done.](#)
"Drainage projects" (establishment, improvement, improvement of an outlet, laterals) are required to consider 9 criteria, including alternative measures to achieve multipurpose water management. This includes alternative measures identified in applicable state-approved and locally-adopted water management plans.

- [§ 103E.015, Subd. 1a. Investigating use of external sources of funding and technical assistance.](#)
Requires investigation of applicable external sources of funding for multipurpose water management, including early coordination with local water planning authorities. Applies to “drainage projects” and petitioned repairs, all of which require the appointment of an engineer to conduct project investigations, prepare plans, and submit a report to the drainage authority.
- [§ 103E.021, Subd. 6. Incremental establishment; vegetated buffer strips and side inlet controls.](#)
This permissive authority enables these multipurpose practices to be done as a repair, where determined to be needed by the drainage authority.
- [§ 103E.227 Impounding, rerouting, and diverting drainage system waters.](#)
Enables drainage system cooperation with programs and participating landowners, including use of external sources of funding for impoundments, wetland restoration, rerouting or diverting a drainage system.
- [§ 103E.701, Subd. 6. Wetland restoration & replacement; water quality protection and improvement.](#)
Enables wetland restoration and water quality practices to be part of a drainage system repair.
- [§ 103E.715, Subd. 6. Repair by resloping ditches, incorporating multistage ditch cross-section, leveling spoil banks, installing erosion control, or removing trees.](#)
Enables erosion control measures and a 2-stage channel to be part of a petitioned repair.

8.4 Evaluating and Selecting BMPs

The process for identifying and selecting appropriate BMPs includes several steps, as outlined in the [MPDM, Chapter 5. Public Drainage System Best Management Practices \(BMPs\)](#).

1. Observe and identify potential problems and opportunities. Physical problems along a public drainage system might include channel erosion, failed side slopes, poor water quality, etc. Opportunities can include sources of external funding, e.g., through a local water planning organization or state or federal agency.
2. Determine the cause of the problem. Causes of observed problems might include open tile inlets, excessive use of nitrogen fertilizers or manure, altered hydrology, etc.
3. Select an appropriate solution. A [matrix](#) in the MPDM lists BMPs that address specific problems, symptoms, causes and solutions.

Early coordination is essential for efficient selection of BMPs. It’s important for drainage inspectors and engineers to have the opportunity to identify and discuss problems/opportunities with affected landowners, potential watershed partners and the drainage authority. [Section 103E.043 Informal Meetings](#) is a good way to coordinate and to identify partners and the potential for use of external sources of funding for eligible multipurpose objectives and BMPs.

Appendix 1. Drainage Proceedings and Procedures Process Charts

Figure 3-1a. Process Summary for “Drainage Projects”

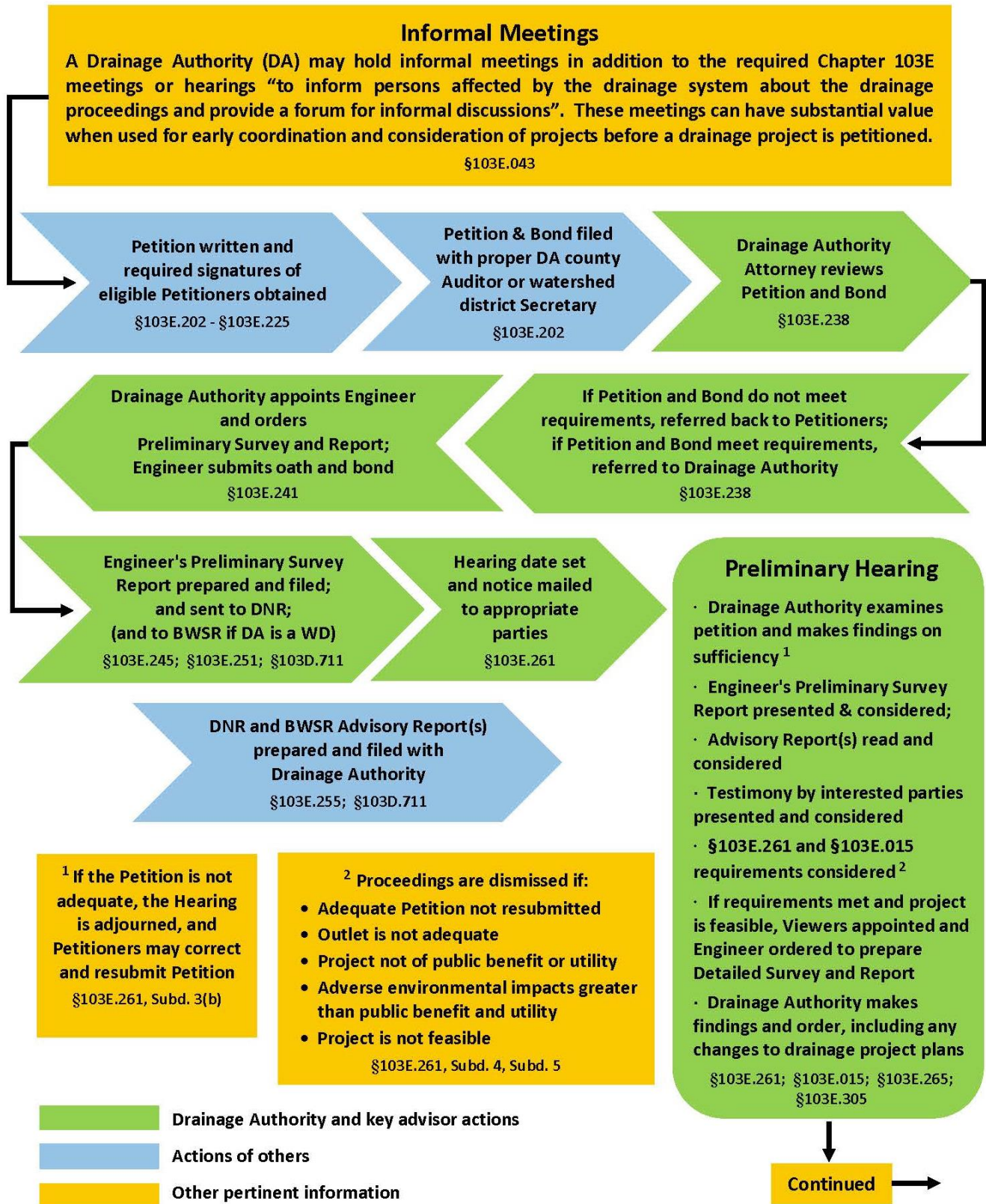


Figure 3-1b. Process Summary for “Drainage Projects” (continued)

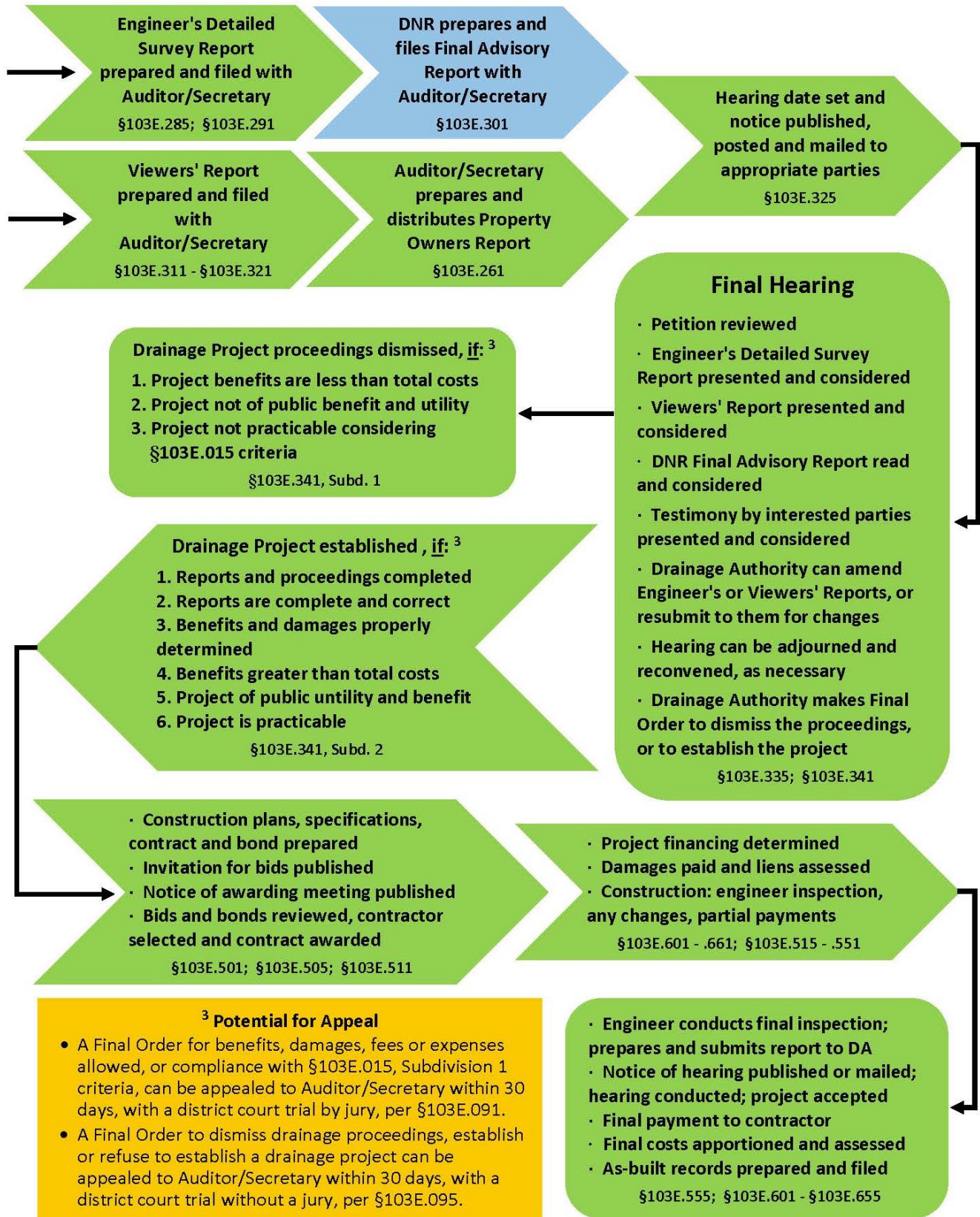


Figure 4-1a. Process Summary for “Repairs Based on Inspection”

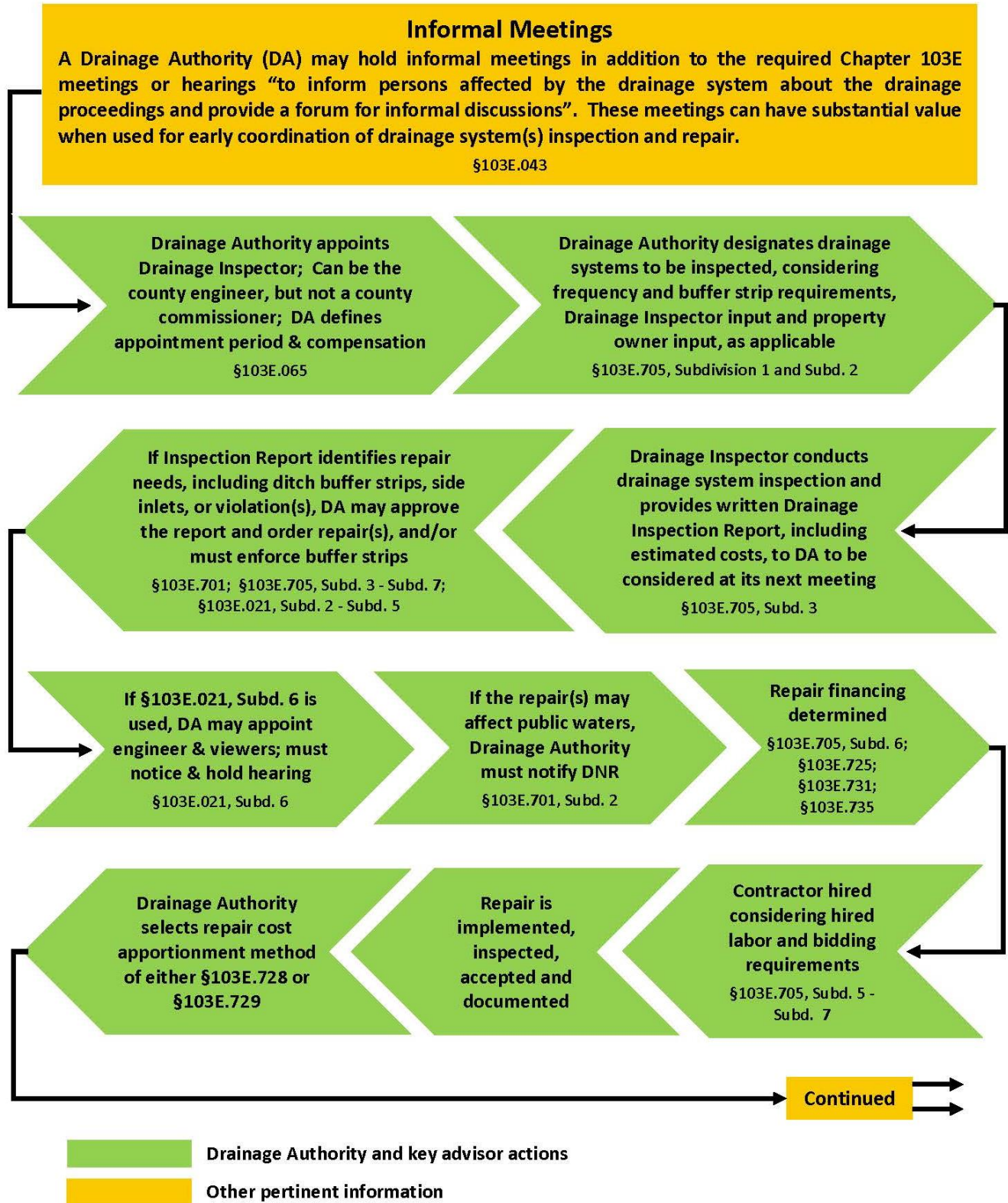


Figure 4-1b. Process Summary for “Repairs Based on Inspection” (continued)

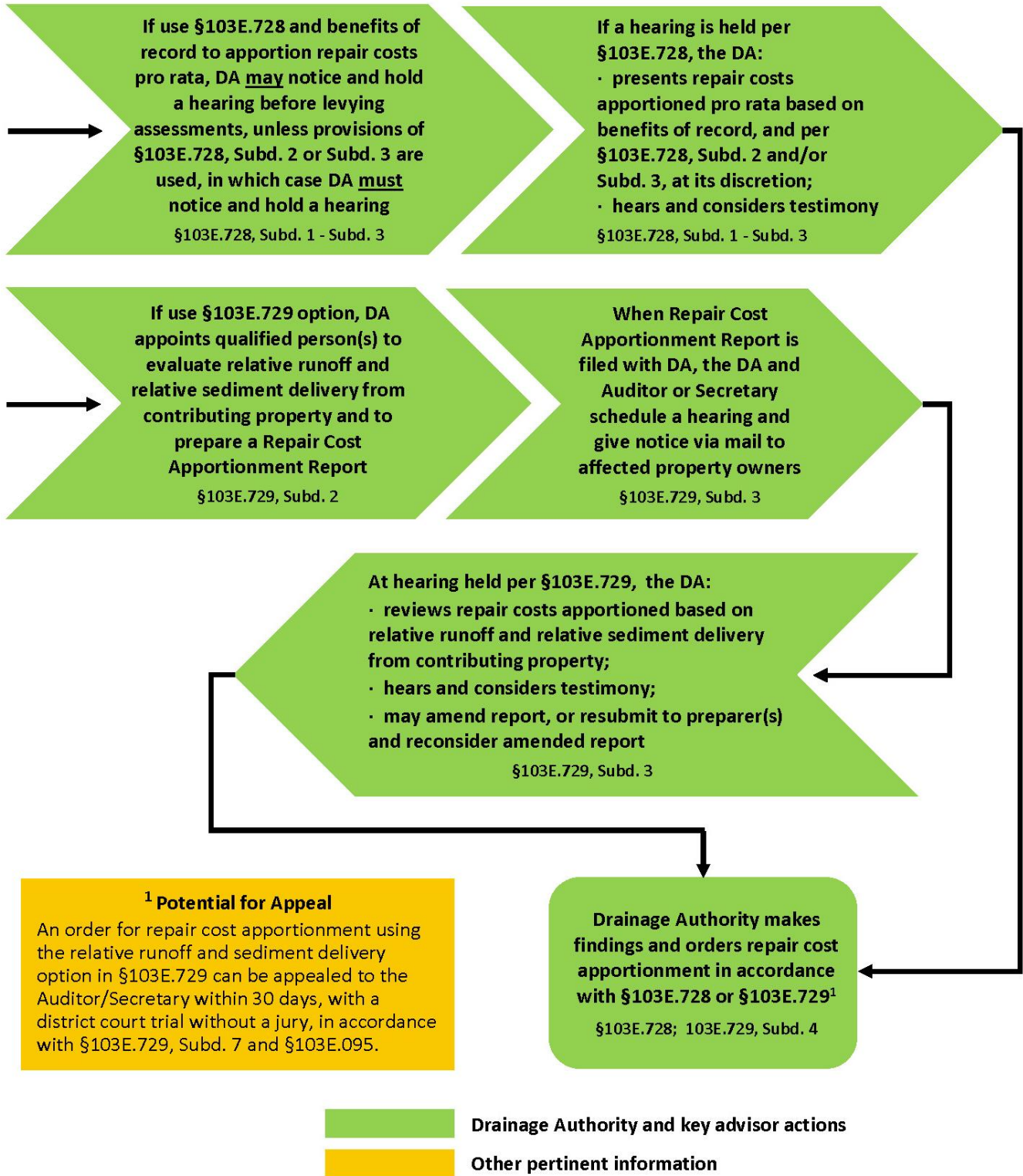


Figure 4-2a. Process Summary for “Petitioned Repairs”

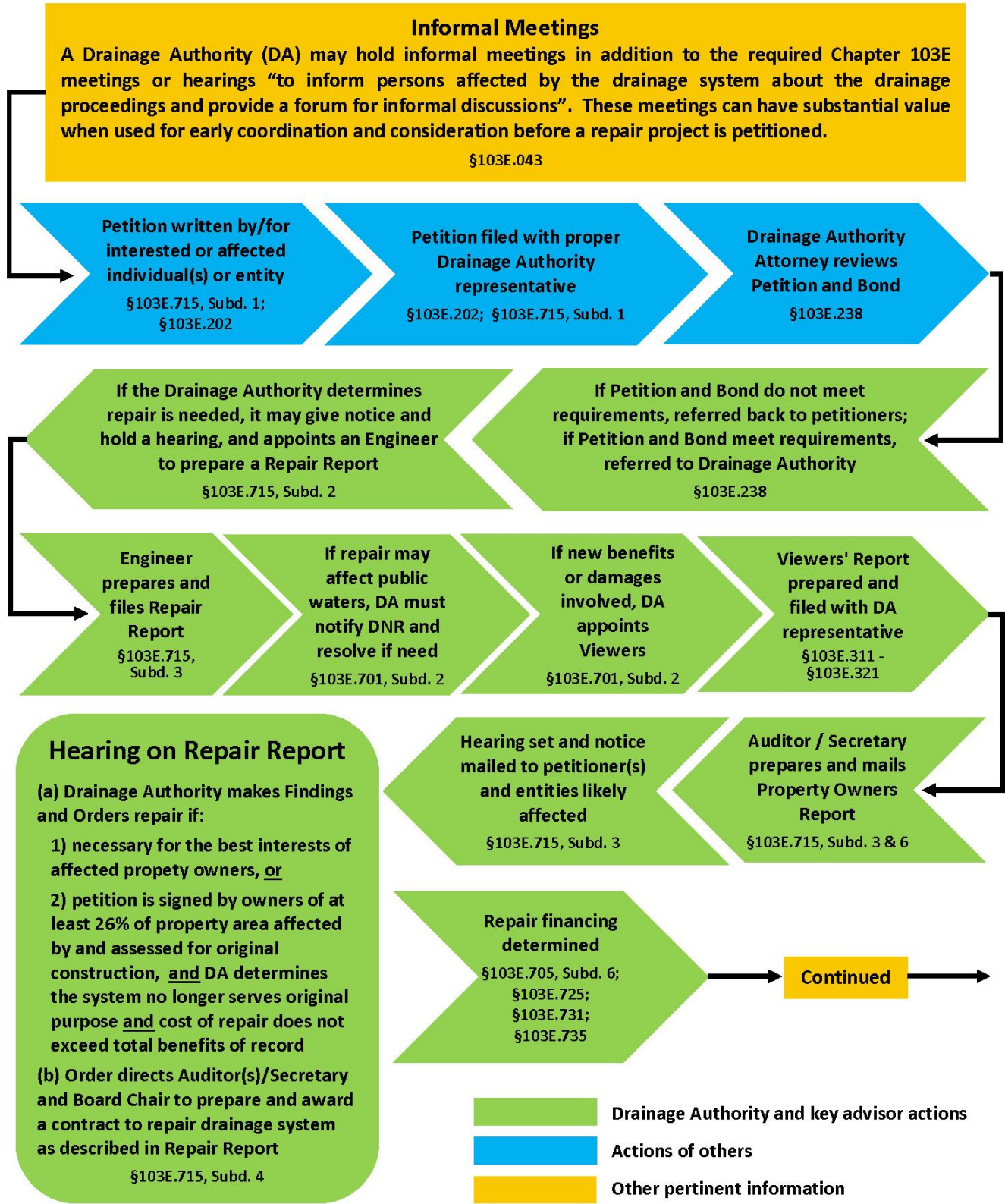
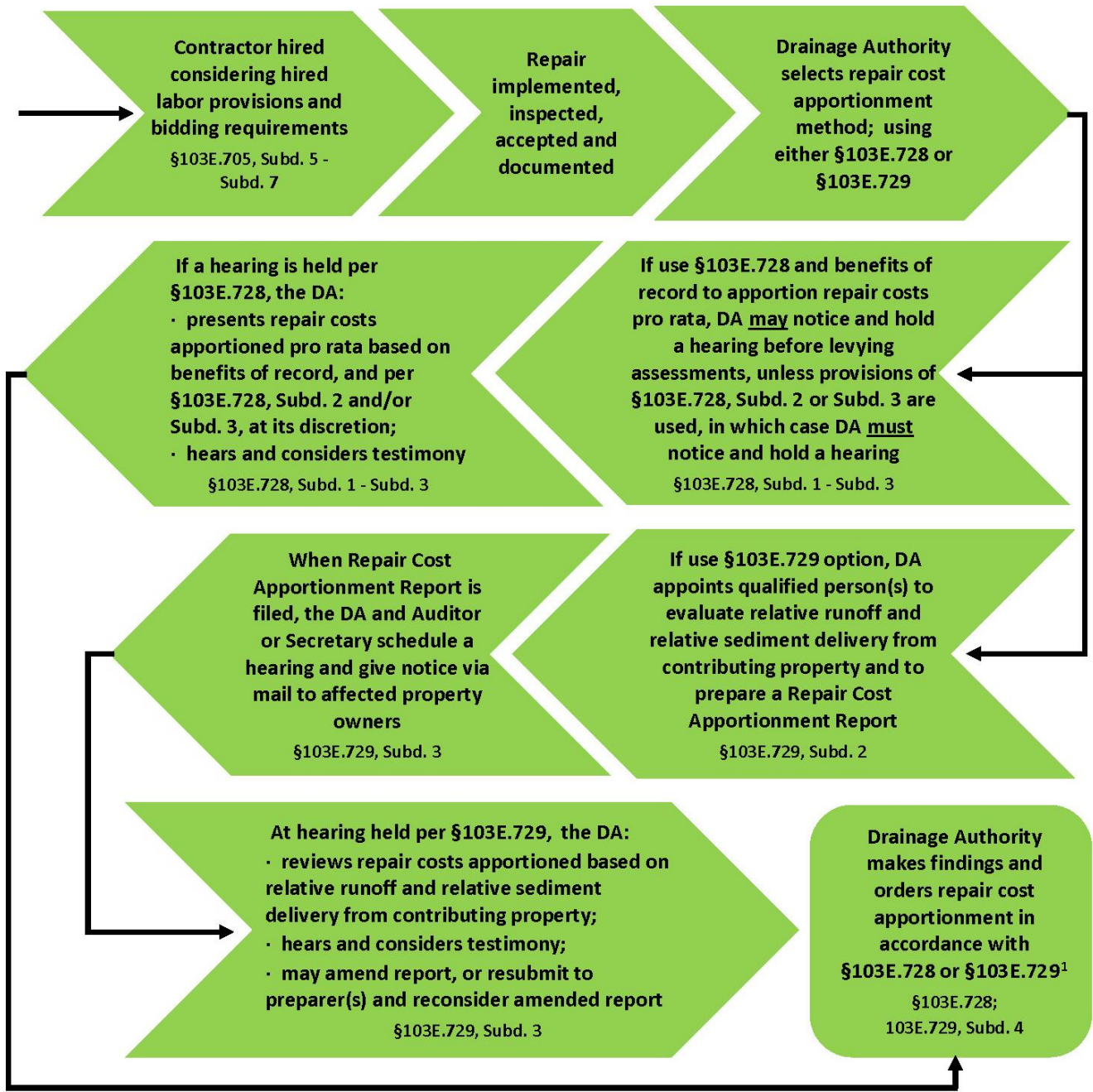


Figure 4-2b. Process Summary for “Petitioned Repairs” (continued)



¹Potential for Appeal
 An order for repair cost apportionment using the relative runoff and sediment delivery option in §103E.729 can be appealed to the Auditor/Secretary within 30 days, with a district court trial without a jury, in accordance with §103E.729, Subd. 7 and §103E.095.

Drainage Authority and key advisor actions
 Other pertinent information

Figure 5-1. Process Summary for "Other Proceedings or Procedures"

